

THE YOUTH'S COMPANION

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*A Weekly Illustrated Magazine
For All The Family*

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IT ISN'T THE WAY THE
SHADOWS SKIP ACROSS
THE FIRE-LIT FLOOR • OR
THE SOUND ON THE ROOF
WHEN RAINDROPS DRIP •
OR THE LILACS' LOOK BY
THE DOOR;—IT'S ALL OF
THEM • SOMEHOW • MIXED
TOGETHER IN ANY WIND AND IN ANY
WEATHER • WITH SOMETHING SWEETER AND
FAIRER STILL • BETTER THAN HEALTH • BETTER
THAN WEALTH • FINER THAN ANY FAME;
WHETHER THE HEART SHALL STAY OR
ROAM • SOMETHING LOVELY WITHOUT A
NAME • TENDER AND BLEST • THAT BINDS THE
REST AND MAKES—HOME • • NANCY BYRD TURNER

THE MYSTERIOUS TUTOR

is not only a delightful story of life on a Southern plantation but also a most ingenious tale of mystery. The Dolgoruki treasure was hidden under an olive tree, but there was no olive tree on the place. How the treasure came there and how it was found and what the tutor knew about it are fascinating and perplexing questions. Primarily for girls, this serial story by Miss Gladys Blake, author of the *Treasure of Thrasymanes*, will interest all the family. It begins in *The Companion* for OCTOBER 2.

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Boston, Mass.

TENDER FEET

MOST of our troubles with our feet come from the breaking down of one of the arches or both,—the longitudinal or the transverse,—though sometimes the distress is owing to shortening of the tendon attached to the heel, called the Achilles tendon, or of the muscles of the calf, of which it is an extension. If we examine the skeleton of a normal foot, we see that there are only three points of contact with the ground as the person stands: first the heel, second the front end of the first metatarsal bone (the long bone of the foot) where it joins the great toe and third the front end of the fifth metatarsal bone where it joins the little toe.

There is, then, a longitudinal arch, the abutments of which are the heel and the extremities of the inner and outer metatarsal bones, and a lateral arch between the ends of the two metatarsal bones.

Most persons have heard of, and many have experienced, the troubles that come from the breaking down of the longitudinal arch, but few know of the lateral arch and the consequences of its sinking. The falling of the longitudinal arch results in flat foot, or splay foot, in which the inner edge of the sole rests on the ground just as the outer edge does; the spring of the arch is broken, with the result that the normal relationship of all the little bones of the foot is disturbed, and thus there is pain. The pain may be acute, or it may be just a tired ache; it may not cease when the person is no longer standing or walking, but often continues for hours and even well into the night, seriously interfering with sleep. Sometimes the pain is worse in cases in which the arch is sunken only a little—probably owing to the fact that the bony part of the arch is weakened so that greater strain comes on the supporting ligaments.

The treatment consists in wearing shoes so constructed that the toes, especially the ends of the metatarsal bones, from which the toes spring, are not squeezed together, and also in wearing specially constructed arch supports,—not the ready-made ones sold in drug stores and ten-cent stores,—exercising by rising on the toes and douching with alternately hot and cold water, and placing an extra layer of leather on the inner side of the sole of the shoe so as to throw the weight on the outer side of the foot. It is usually necessary to place a properly fitted pad on the anterior end of the arch support to prevent sagging of the lateral arch. When the Achilles tendon or the calf muscle is too short the muscle must be stretched by proper exercise or by a special form of apparatus. That is better than increasing the height of the heels, which gives momentary relief but leads in the end to a gradual increase of the trouble and in extreme cases even to clubfoot.



TEARS FOR A SCULPTOR

I AM a bit afraid to tell what I think of Saint-Gaudens, says Mr. Henry Holt, speaking in his Garrulities of an Octogenarian Editor, of the great American sculptor. I doubt whether we have the best of him in New York. When I look at his Sherman in the Plaza at 59th Street or his Farragut in Madison Square I feel keen intellectual delight, but when I first looked at the Shaw monument and caught the light on the woman's face and turned and saw Saint-Gaudens standing behind me I do not mind confessing that tears were in my eyes and I found it hard to speak.

That's not, however, what I said I was afraid to tell, but I am going to tell it, though I cast discredit on my judgment. I have stood long before that piteous Pieta in St. Peter's and before the Laocöon and the Niobe and the rest of the classic things, and I never shed tears or faltered in my voice before them. And that is why I think that in my time our own little old New York has produced the greatest sculptor the world has ever seen.

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THE YOUTH'S COMPANION

THE BEST OF AMERICAN LIFE IN FICTION FACT AND COMMENT

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DRAWINGS BY B. J. ROSENMEYER

IDLE AUTUMN



O, hum," said Mrs. Dale, leaning back a trifle impatiently in her willow rocker, "I guess Idle Autumn is upon me at last."

Her eyes sought the open window and the scarlet-canopied maples on the lawn and beyond them the amethyst, softly-blended fields of afternoon. Late flowers, delft and golden, trudged like yellow-haired lads and blue-aproned maidens along the gravel-gray road, crowding as if to catch a glimpse of the softly veiled loveliness of the bride-sweet fall; and far off the faintly tingeing wood tossed gently like the plumed bridesmaids' hats of a rainbow wedding.

"Ho, hum," said Mrs. Dale again. Too vigorous for idle-handed rest, she rose and faced down the autumn road; she was a tall woman and large, with shrewd humorous dark eyes and an expectant twinkle about her brown face as if she were looking always for something jolly round the next corner. "Well," she said and smiled to herself, "I guess this time of year was made for rest time, but I just don't believe I was built to rest."

Years before she had christened this lazy Indian summer season that tucks itself dreamily into late September Idle Autumn, because just at that time the pickling and preserving and canning of earlier weeks were done, the house was at peace after its fall cleaning, and the grapes were "done up," but the russet pears and bright apples of October were yet hard and unflavored, and the outdoors was still too inviting for the tedious indoor hours of fall sewing.

"There's little a fellow can do in Idle Autumn except wander," Johanna Dale had always said in her deep, crisply-humorous voice.

And so she wandered—through her fields, her garden, even through the far timber with her joy-frantic red Irish setter Rusty cutting every thicket with his sturdy auburn length in search of quail.

Johanna Dale—"Mis' Jonny," as she was known to the softly-drawing south Missouri neighborhood where her home was—lived contentedly alone. She had been married and widowed while still young, and now in early middle age had seen her children married and settled comfortably in niches of their own, but after that she had cheerfully refused to be a friend to loneliness. "I'll open all the windows and keep busy," she said to herself genially. "There's only one thing in the world can get the best of a body, and that's idleness."

Now, a challenge to this season that of all the seasons of the year came nearest to upsetting her resolve, she put on her long-tailed sunbonnet and her old garden gloves and went out into her herb garden. It was an enticing, spicy place full of sharp, sweet smells, full-leaved and ready to be garnered for winter flavor and fragrance. Johanna set to work on her rows of lusty sage, wondering as she stuffed a clean white flour sack with the odorous leaves what she should ever do with such a supply.

"I'd give them to the neighbors," she soliloquized genially, "all they would take; and there's the rosemary and lavender for scent bags and the spearmint and peppermint and caraway for seasoning and catnip

I. JOYFUL BUSINESS

By
Gertrude West

for the Catalpa babies. I'll have the west room full as usual."

Rusty had started a rabbit in the old orchard, and his sharp, eager barks came as a companionable sound to the woman at work among her herbs. The little hillside farm overlooking the village of Catalpa might have seemed solitary to any chance passer-by, but neither the woman nor the dog felt the solitude. The two-story house was old but well preserved and coolly green and white behind the maples. The orchard was old too and unpruned, but the whole place was trim and neat, and beyond the herb garden was another garden riotous with late flowers and laden seed stalks; and beyond that lay the vegetable plot, weedless but bristly with the horned seed pods of radishes, the ruffled stalks of seed lettuce and the tall crackling ranks of sweet corn bearing a smattering of dried and wrinkled ears. To complete the tranquil scene of harvest-time thrift a long shelf ran under the ledge of a southern kitchen window, and on it was spread the drying pulp of cantaloupes and tomatoes, with the white seeds gleaming in their withering web.

Johanna Dale, absorbed in her pleasant task, did not notice when Rusty's intermittent staccato barks changed to a rumble of warning at the lower gate. When at a shrill hail she looked up at last she saw a lean, gray horse and an old top buggy drawn up in the road. Mis' Jonny set down her bag of sage and, pushing back her sunbonnet, walked briskly down the path. Two girls had got down from the high seat and, heedful of Rusty's warning, were standing a little way from the fence.

Mis' Jonny herself had never been pretty in her girlhood; her one daughter had been tall and plain, though charmingly good-humored and of face like her mother. Now her dark eyes brightened at sight of the two girls at her gate. They were slim and fair—small for thirteen and fifteen years. Under the stiff little straw hats brown curls and a silver-gold fluff of hair broke away from confining braids. Their blue gingham dresses were old-fashioned and baggy, but Johanna had a vision of what the two might be in the saucy hats and jaunty little frocks that other girls of their age were wearing. Behind the two girls, lending a birdlike dignity to the ragged equipage, sat a little poverty-stricken though courageous-looking woman.

"Would you like to buy some blueing?" said the darker of the fairy girls, tonelessly polite, to Mrs. Dale.

"Blueing?" repeated Johanna doubtfully. She took the bottle of pale indigo that the golden fairy proffered and eyed it distastefully. Then her blunt, kind, spirited



And the mother, looking, gasped

tongue broke bounds. "Heavens and earth, children," she inquired protestingly, "who in this world does want to buy blueing? Wash day's a thing that people like to keep out of mind in pleasant outdoor weather like this. A provident housewife keeps her blueing poked out of sight on her soap shelf. Don't you know that anything to sell along a country road must be something people like to leave their work to linger over?"

The two girls listened to Johanna, round-eyed, but a half-comprehending look flickered in the little woman's tired face. "I wonder," she said and added with a half smile, "Well, I'm sure nobody's lingered over us."

That half-hearted touch of humor was all the key to fellowship that Mrs. Dale needed. She chuckled and unlatched and threw open the gate. "Come up on the porch," she invited them briskly. "I've got some nut cakes that are going to waste for want of company, and a glass of grape juice with mint leaves is enough to set anybody up. Come in."

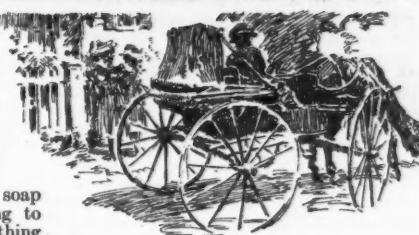
"But—we don't mean to bother," protested the woman weakly.

"Bother?" jeered Johanna crisply. "Why even a lone woman like me likes visitors once in a while. Come in."

So they came and sat about Johanna's little porch table and after their warm dusty drive eagerly took Mrs. Dale's simple refreshment. Johanna sipped and ate with them, and when the eyes of her three guests had brightened with the food and the restful shade of the porch she frankly brought up again the question at the gate.

"Why," she asked, "do you choose to sell blueing when there are so many other things you might sell?"

"Well," answered the little woman hesitatingly, "I had a receipt of my mother's that was cheap to mix, and blueing's something everybody needs, but—We ain't peddlers by trade," she added hastily. "Tracy's our name. We've got a little farm across Locust Hill; we tend it ourselves, the girls and me. I'm a widow, and—it don't pay very well. The girls wanted money for books and clothes to go to high school, so we hit on this plan of selling blueing. We set out early every morning and drive home



at night. We've covered a good bit of country in the last week, but we ain't sold—much."

"I see," observed Johanna and puckered her black brows in thought. When she spoke it was as if she were talking to herself. "To-day—let's see, it's Thursday; Monday the county fair opens at Catalpa." She stood up quickly. "I've got a plan," she said abruptly, "a plan to earn that school money in three days instead of selling blueing for three months and losing half the term. Is there any reason," she demanded, "why you can't stay here over Sunday with me and help get ready?"

"Ready?" gasped the little woman, amazed at this energetic lady who had so deftly taken over her affairs. "Ready for what?"

"Ready for our booth at the fair," replied Johanna calmly. "Instead of blueing those two little girls of yours are going to sell something nobody can help buying. I always thought keeping a greenhouse must be a joyful business, and I don't see why selling flower seeds shouldn't be too."

Johanna Dale's determined energy was a breeze that carried the little woman's indecision before it. "There's Brindle," the visitor protested half-heartedly, "and the chickens."

"The chickens," decided Johanna, "can look out for themselves, with grasshoppers as thick as they are, and the cow—I'll ask Nick Beverly to go and drive her over here. Nick's a young neighbor of mine that I adopt when I need a boy about. Now that's all settled, and we can get to work."

It proved to be a busy time for Johanna and her guests, but a gay one for all of that. Friendship ripened fast under the unusual circumstances of strangers' thrown together under the same roof, working and planning and laughing together. There were the swift,

breezy mornings when the four of them gathered seeds and herbs in the old garden while the lilac mist of the valley slanted dusty silver against the lazy sun and the hilltops lay bannered with flaunting sumacs beyond. And there were the long still afternoons when while the hazy yellow sun ladders leaned lower and lower against the west they all worked together in the big sitting room making gay packets of sweet pea and nasturtium, pansy and aster, seed, sewing quaint bags for the lavender and rosemary and tying tight savory bunches of sage and mint and thyme.

"Mint stalk and marjoram, lavender and rue," murmured Johanna one evening, mindful of a half-forgotten poem, and her softened dark eyes rested upon Alice, the fair little girl.

She rose and went upstairs presently and came down with an old blue satin dress across her arm, fashioned in the style of her grandmother's day.

"And white hand shading her sweet eyes, the lone shore lass," she went on with her lovely old lines and laid the shining folds against Alice's slight figure. "Hold it there," she commanded and swiftly twisted the girl's soft hair into a high knot with one curl across a slender shoulder. "Look who's to sell herbs at our fair!" she cried excitedly, and the mother, looking, gasped, hardly recognizing this lovely old-fashioned girl as her own little daughter.

Johanna found another dress for Elsa, the brown fairy. It likewise was old in cut, but bluish rose in color, and the flaring overskirt under the tight bodice lent itself readily to Johanna's nimble fingers until it took on the petal-shaped folds of a flower. And, though the task kept them all busy as folk could well be, they were ready for the fair on Monday morning.

It had been a prosperous year about Catalpa, and so people came in light-hearted throngs to the county fair, willing to spend readily what they had earned. The tiny booth in the corner where the brown-eyed bluish rose and the blue-eyed "shore lass" presided received its share of patronage.

The booth itself was a flowery place, garlanded with sumac and wild ageratum, late goldenrod and asters. Its one counter was heaped with bright-colored seed packets, all sealed and labeled ready for the spring planting, and with fragrant bags and bunches of herbs and quaint little winter bouquets. Over the whole in gold letters, posted with painstaking fingers, arched the words:

"Johanna Dale's herbs and flower seeds." The two girls who presided and the anxious little mother never guessed the prestige that the name gave to their humble enterprise.

"I do believe we're going to sell out," whispered Elsa, star-eyed, jingling more dimes upon the heap of silver already in the cash box. And her sister nodded with her cheeks bright with hope.

Toward noon the high school principal himself strolled by. He was a friend of Johanna's, but, if he had been apprised of the purpose of the ambitious little booth, he gave no sign. "Little future hopes done up in packets," he commented genially, fingering the bright papers. "I've a bit of a garden myself, and it's best to be prepared. Spring comes on us so suddenly sometimes it's apt to catch us napping. Sweet peas; of course I must have some sweet peas—a rainbow arch of them with a pot of marigolds at the end. It's a fancy of mine, and there's a corner I always keep spread with pansy velvet in case some fairy queen might deign to walk into my dooryard."

So he went on with his selection of seeds, and when he had finished with seeds he bought herbs for his mother and lavender and winter bouquets for his friends. He went away laden at last, leaving two laughing little girls suddenly not the least bit timorous about entering that new strange school world which before they had dreaded just a little.

The little seed and herb booth proved as novel as it was pretty, and a tinkling patter of small coins rained in the cash box from the time the crowd gathered each day until it dispersed. Drawn by the loveliness of the little canopied rainbow-strewn counter, folks came, and once they were there either the name of Johanna Dale's seeds appealed to their thrift or else the happy, eager faces of the two girls behind the counter caught at their friendly hearts. At any rate they bought, and the two salesgirls were no more delighted than Johanna herself.

It was the afternoon of the third and last

day of the fair that a huge, ruddy-faced old man pushed through the pleasant little group that hung about Johanna's booth; his nose wrinkled like that of a rabbit on the scent of parsley. "Hello here!" he said gruffly, folding his arms on the counter among the bright packets. "I smelt sage a block away. That's what brought me here."

He picked a green fragrant bunch from among the herbs and lifted it, and his eyes faded reminiscently into their wrinkles as its fragrance charmed him. "That's the first sage that smelt like sage I've smelt for years," he declared. "Ye ain't got a brown roast chicken round anywhere, have ye, to go with this?" he demanded with a twinkle.

Alice shook her head, smiling. "Seems like," the old man went on vehemently as if stating a grievance, "styles change in chicken dressin' as well as any other kind. They can't make plain sage dressin' now, I understand; it ain't bein' done. What they bring ye these days is full of oysters and chestnuts with maybe a few shoe buttons and hairpins throwed in fer good measure—anything to keep it from tastin' like good old-fashioned sage dressin'."

Alice nodded sympathetically. Always tender-hearted, she was quick to understand the real pathos under the humorous gruffness, even though she could not know that he was only a hearty, hungry old man trying to catch again the savor of youth that had flavored all boyhood things and that then had slipped away like a fading halo with the years.

"Mother makes it," she said to him, "the loveliest sage dressing. If you're ever out beyond Locust Hill, come to our house," she invited him impulsively. "Mrs. Tracy, my mother, will make you some."

The old man's eyes brightened as much over the pretty kindness of the invitation as over the promised treat. "My name's

Williams," he went on, "Captain Williams, they call me, but o' late years I ain't captained nothing except a lot of hard-earned greenbacks that can't buy half the pleasure a dime used to. Ye say yer ma makes good sage dressin'?"

Alice nodded positively. "Well," went on the old man, "I live up yonder." He pointed off to a story-book hill that lifted at the edge of the village with a great brick story-book house hung in the flame of frost-kindled maples on its summit. "My good old wife's been bedrid for years. I hired us a plain cook and then a chink and then a chef, and none of 'em could do good home cookin'. I've starved," he added pathetically, "fer twenty years."

He did not look ill fed, only cross and peevish—an old man who could not quite give up the struggle for the zest of his earlier years. But there was genuine sympathy in Alice's eyes. "I wish you could just taste my mother's cooking!" she said loyally.

At dusk the happy-hearted seed and herb venders "struck their tent," as Johanna jovially termed it, and packed the slender stock still left into the "hackabout," as she called the little truck that served her in place of a spring wagon. As they jolted home through the autumn night scents of seared leaf and hanging smoke, with Elsa beside her mother and Alice, star-eyed, holding the cash box, Johanna said to Alice:

"So you talked to Captain Williams today?" And her eyes were twinkling in the dark. If no one guessed how for three days she herself had been manœuvring to pilot Captain Williams within sight of that dainty little booth, she would be the better satisfied.

"Yes," agreed Alice vaguely. She was thinking of other things—of the beves of bright-eyed school girls she had seen on the street, of the domed waiting high-school building in its own elm-shaded block, of the kind-faced, twinkly-eyed man who planted

sweet peas to grow a rainbow and marigolds to make a pot of gold.

Then a comparison rose in the girl's mind, and she uttered it thoughtfully. "He seemed such a sour old man," she said half pityingly. "I don't suppose he ever planted rainbows in his garden."

Johanna smiled. "No," she said, "but Captain Williams is a sad old man too. It's been years since any young voices brightened his musty old house. Mr. Carol, the school principal, has kept his heart young in the schoolroom; besides, he isn't old."

"No," agreed Alice, "he laughs like a boy."

"Well, that boy's laugh will go with him all his life," Johanna said simply. "It comes from the inner fountain of perpetual youth," but I believe Captain Williams is beginning to feel his lack. Today he said to me: 'My wife and I would be better maybe for some youngsters about!' In fact,"—she turned to the mother,— "in fact, Mrs. Tracy, he's looking for a housekeeper. He must have heard somewhere of your cooking. He said he'd like to try your sage dressing. He said the girls could have a big sunny room there and—"

"I could be with them," finished the little mother. "I never thought, I never dreamed, of such luck as that! Only it ain't just luck, Johanna Dale; you're back of this."

But Johanna laughed briskly and shook her head. "It's just a sort of gravity," she declared. "When folks need each other circumstances just naturally draw them together. Let me see," she said thoughtfully, "school starts Monday. Do you suppose you could get ready to move into town by then? The girls ought to start in with the rest. Let me see, tomorrow is Thursday—"

She broke off suddenly. "Thursday," she repeated incredulously; then she chuckled softly to herself, "Thursday—and a week of Idle Autumn gone already!"

A STRATAGEM IN HYDRAULICS

By C.A. Stephens



DRAWINGS BY W. P. DODGE

WHEN we lost our new hardwood-floor machine in the pond above the old squire's sawmill on Lurvey's Stream Elder Witham, who was running the band saw, shouted, "There goes twenty-six hundred dollars!"

It was back in the days when hardwood floors of maple and birch first came into demand for new houses and for kitchen and chamber floors in old ones. Before that time house floors had been laid mainly of wide pine and spruce boards. Then suddenly within a year or two came the call for hardwood floors laid in narrow strips three inches wide, neatly planed, grooved, tongued and blind-nailed together. If the prepared lumber was selected with care as to color, beautiful polished white floors could be made of maple bordered with the red heart wood from large yellow-birch trees, and pretty effects produced by a border laid in alternate white and ruddy strips mitred together at the corners of the room. The popular demand for hardwood at once became large.

The current price for such lumber was then from forty to fifty dollars a thousand; and the old squire, who at that time was doing a considerable lumber business and who had plenty of hardwood growth on his forest lots, determined to embark in the new venture. He equipped our sawmill with the necessary machinery for it and with a kiln for drying the hardwood boards, since such lumber must be seasoned as dry as bone. Later we steamed all our hardwood lumber in a steam kiln before finally drying it for market.

Formerly the mill had been run only for spruce and pine and made use of upright mill saws with saw carriages of the old kind

for soft lumber, but now a heavier rig was required. We put in a band saw for slabbing and sawing the large maple and yellow birch logs into boards and also a quick-running stripper for splitting the boards into strips three and a half inches wide. The nicest and most difficult job of all had then to be done. Each strip had to be planed and exactly evened in width and also tongued and grooved so that the ends might not "huff up" in the floor.

All that planing, evening, grooving and tonguing was done at once by a newly invented machine into which the rough strips were run rapidly to emerge at the farther end as perfected lumber ready for the drying process in the kiln. In the machine were combined two eveners knives, a double planer, a grooving plow, a tongue plane and an under plow. Such a machine had to be heavy and strongly built to stand the stress

of hard work and the strain of the heavy power required to drive it at high speed. Not less than a hundred and fifty horse power is necessary to run a first-class hardwood-floor machine at economical speed.

Not only is such a machine heavy—it weighed nearly or quite two tons—but it is expensive. The price of our first one staggered us; twenty-six hundred dollars the old squire had to pay for it. Two spans of work horses were required to haul the machine up to the mill from the railway station eleven miles away.

There had been delay in shipping it to us. When it finally came the brow of the mill and the ground all about the front of it were piled high with maple and birch logs, so that it was difficult to bring the

We had to jump to save ourselves



machine into the mill. Asa Doane, who was driving the team, proposed going on up the road to a landing near the upper end of the mill pond. There the sled with the machine on it could be lowered to the ice of the pond and pushed down to the mill slip, where it could be hauled into the mill by water power.

Elder Witham, who was head sawyer at the mill that year, thought well of the plan; and after looking the route over the old squire agreed to it, since it would be a day's work for three men to clear the brow of logs.

The mill pond was merely an expansion of the stream caused by the sawmill dam that had been put between two rocky hillocks on either side of the channel. It had a lift of sixteen feet above the wheel pit of the turbine that furnished the power. The dam was of logs and pine plank, and, though sixteen feet or more in height, was scarcely more than fifty feet in length; but the pond above it went back for nearly half a mile and at that season—December—was covered with ice four or five inches thick. It looked strong enough to hold almost any weight.

Asa therefore drove on up the road to the upper end of the pond. The horses were taken off, and then without much difficulty and with no hard lifting the sled with the machine on it was eased down the snowy bank and shoved out on the ice. Seven or eight of us, including Elder Witham and the old squire, then started to push the sled down to the slip. Heavy though it was, the sled did not push hard; Addison and I could push it alone after it was started.

One contingency, however, none of us had sufficiently considered. For a week or two the mill had been running during the day and shut down at night. The turbine drew out water fast. From morning till night the level of the pond fell as much as four feet, to rise again before the next morning. The ice of course rose and fell with the water, but the fall and lift had cracked it in many places; and, although zero weather prevailed some nights, the great sheets of ice had not always frozen together solidly. Flurries of snow too had concealed the cracks.

We were within fifty or sixty yards of the mill slip when suddenly the ice parted under the left shoe of the sled. Machine and sled canted, capsized, crashed through the bordering ice and soused down out of sight. We had no time even to try to avert the accident; we had to jump to save ourselves and avoid the ugly hole where the cold, black water boiled up tumultuously.

It was then that Elder Witham glanced at the old squire and exclaimed, "There goes twenty-six hundred dollars!"

For some minutes we stood round and discussed the catastrophe.

"It will take a derrick to raise it," said Asa.

"And you couldn't very well plant a derrick on ice no thicker than this," observed Addison.

The old squire looked dejected. "I shouldn't like the job of getting that machine out," he said. "I declare for it, I shouldn't know how to go to work!"

"Oh, there should be some way," Addison remarked, partly to cheer up the old squire. "But how, boy, how?" asked the elder. "Water's fifteen foot deep there, and that machine weighs a good two tons!"

"Oh, I guess we can get it," Addison said lightly. He enjoyed mystifying the elder, who did not like him very well.

"Oh, I don't say that the machine can't be got out at all," the elder replied. "But we haven't got lighters here for derricks or steam winches to work with. It's going to be an expensive job, squire, to rig tackle for it."

"I guess it can be managed without much expense," Addison said. He glanced at the old squire, who stood listening to the talk, and then at the elder. "Why, I think I can as good as promise to have that machine in the mill all ready to set up by ten o'clock tomorrow."

The elder regarded Addison with incredulity. "We shall be glad to see you do it!" he said and strode back to the mill to start the band saw again.

"Addison, do you really see any way of doing this?" the old squire asked him.

"I think so," Addison replied. "I don't like to promise too much, but give me two men to work with, and I think I can put

that machine in the mill before noon tomorrow."

"Take two men or ten!"

At that time the old squire and other lumbermen were sending a great deal of poplar and spruce pulp wood down Lurvey's Stream to paper mills a long way below. The method was to saw the logs into bolts four feet long, tumble them into the stream and at high water the following spring drive the entire cut of bolts; that is to say, let the bolts float down with the current. The only trouble with the plan was to prevent the bolts from lodging along the banks or from floating out on to meadows. To guard against that the owners united in hiring a gang of ten professional river drivers, who followed the drive downstream in a bateau and set the stranded bolts afloat.

It was generally a fortnight's job; the river drivers carried their food with them and camped on the bank wherever night overtook them; and for transporting their supplies, tools and extra clothing they had a huge chest, or wangan, aboard the bateau, which had therefore to be of considerable size. The one used on Lurvey's Stream was about twenty-four feet long, peak-nosed at both ends and six feet wide amidships. For several years the craft was kept during the summer in a rude shed near another sawmill two miles above the old squire's.

Addison summoned me and also took Asa Doane with him. We went up to the place where the bateau was kept, took off the wangan and then, sliding the bateau down on the ice, pushed it like a sled before us down to the mill pond. There we launched it in the hole through the ice that the machine had broken. Then, going to the foot of the dam, at the lowest point in the bed of the stream below it, we cleared away the ice with axes and cut a hole through the pine planks of the dam—a large hole five feet square. It was not an easy task, and it was a very wet one, for the water rushed out with tremendous force; but we cut the planks round in such a way that the entire orifice opened at once.

Immediately the water in the mill pond began to lower, and the ice settled with it. Soon the mill stopped for lack of power. By four o'clock that afternoon all the water of the pond had run out. On making our way over the broken sheets of ice to the place where the machine had sunk we discovered it lying partly out of water with the bateau stranded askew over it.

First we cast the machine loose from the sled. Then we brought from the mill two strong log chains and by using levers managed to pass the chains beneath the machine and up round the bateau, which we pulled squarely over it. After that we made haste back to the dam, brought new planks from the mill and patched the hole that we had cut at the base of it, doubling the planks over the hole on the upper side and making all as tight as before. The pond began slowly filling again as water from the stream flowed in at the upper end.

"Everything now depends on those chains round the bateau," Addison said to me. "You and I will have to watch tonight."

We got our supper at the millmen's boarding camp near by and then as night fell muffled ourselves in our fur coats, lighted a lantern, took axe and bar and made our way out over the ice to the bateau. The rising water had just begun to float it; we got aboard, remained there all night, ready to shift or ease the pull of the chains as the water slowly lifted the bateau. For that was Addison's project, to make the buoyancy of the large bateau lift the machine from the bed of the pond.

It was a cold and tedious vigil for us, but there was enough at stake to make it worth while. Several times during the night we had to alter and ease the pull of the chains and make haste about it; but on the whole the plan worked well.

By seven o'clock the next morning the pond had filled again and water was running over the waste way of the dam. The bateau with the machine had risen with it. Owing to the motion during the night the ice cakes had not frozen together very much; there was no great difficulty in opening a channel for the bateau down to the mill slip, which may be described as an inclined way made of timber, where pine logs had formerly been drawn up into the mill from the pond.

The machine itself was still three feet under water beneath the bateau, but we

were able to ground it on the submerged end of the slip, where we reeved a long cable chain carefully round it. The power of the turbine was then applied cautiously, and without the least hitch or accident the machine glided up the slip and forward to the centre of the mill—at just eight o'clock that morning.

FOUR ADJECTIVES

By Florence S. Page



DRAWINGS BY
M. A. BENJAMIN

"NANCY, I want you to go too!" "Well, darling, I wouldn't object to it myself. A weekend at a mountain lodge, pine trees and a lake, boys and girls and a celebrity that I worship from afar make a combination that completely appeals to me. But I can't accept when I'm not asked!"

"If you'd only gone to Mrs. Dale's tea with me, you might have become really well acquainted," Marian said and sighed, gloomily gazing out the window at the burnished tops of the campus oak trees. "You know I begged you to go. O Nancy, she's a marvelous hostess! We'll have such glorious fun!"

"Well, don't be despondent about it, Mar! Having fun isn't so bad." Nancy, flat on the floor, lifted her auburn head from her pillows and smiled up at Marian whimsically.

"Don't tease," Marian shrugged her shoulders petulantly. "You know it's because I want you along. If you'd only—" "Now don't say that again, Marian. I wish I knew Mrs. Dale too, but I thought it would be such a bore—"

"That's the trouble with you, Nan; you don't think anyone is interesting who isn't our own age. It's so silly—"

The door flew open, and two girls entered, one tall and fair-haired with a mischievous pointed face, the other slight and seriously sweet.

"Nancy Lee!" the taller one protested. "I've never seen anyone like you for adorning the floor! You rest on it, study on it, probably eat off it—"

"There, there, Fran. Why are you and Lela prowling round like this? I thought the dean had you in life-long conference."

"We've just come from there," Frances said down on the bed and slipped a gold-green pillow out from under Nancy's head. "We bring you great news, *citoyennes!*"

"O dear!" Nancy sat up straight on the floor and ruffled her red waves of hair wildly. "You're going to make us do something frightful, Lela; I can tell. I ought to have recognized your conscience-stricken look! O dear! I wish you weren't so little and so mighty."

"I can't help it, Nancy," Lela explained. "It's Mrs. Ward's idea, not mine. She thinks the hall girls haven't been attentive enough to the faculty wives who have entertained them. So she's giving out lists for us to call on. We have Mrs. President—"

"Oh, horrors!" Nancy groaned, clearing a pile of books from a wide chair and motioning Lela into it.

"Mrs. President," Lela continued, "and Mrs. Henderson and the new Latin wife and Mrs. Dale. And the dean suggests that we go this afternoon. If we put it off, we'll forget about it."

"This heavenly afternoon? Imagine!" Frances sank back on the bed and waved her hands hopelessly. "I had the loveliest plans about woods and bacon and a book."

"It's so unnecessary," said Nancy rebelliously. "They don't want to talk to us, and we don't want to bother with them. Frightful waste of energy!"

"I think we'll have to do it," Lela said firmly. "Mrs. Ward has been so kind to us about our plans this year."

"I know what let's do!" The girls saw Nancy's brown eyes becoming dreamy

The old squire, who had been moving round anxiously ever since daylight, watching our operations, now clapped his hands like a boy and shouted, "Hurrah! Well done! Elder, what do you think of that?"

But the elder, who was filing the band saw, would neither look round nor say a word.

and wistful as they always did when she was planning mischief. "Let's get some excitement out of it since we have to do it. Let's change characters."

"What do you mean, Nan?" Marian asked, passing round some chocolate peppermints that she had discovered under her papers.

"It won't matter to the wives. They don't know us anyway from one another. Let's each take a slip of paper and write an adjective, like gay or hopeful or impertinent—no, we couldn't have that; it would have to be a courteous adjective. But we can select them carefully. Then we'll each draw one without looking and promise to act out whatever characteristic we find during our call."

"Another of Nan's thoughts," said Marian, chuckling. "I wonder where this will land us."

"O Nan!" Frances cried, "I love it! You're a wonder!"

"Not at all," Nan said modestly. "Anything to give each life a little sunshine. Well, shall we do it?"

"I can't go to Mrs. Dale's if we do," Marian objected. "She knows me too well for me to appear all changed round."

"Well, you can be barred from there," Nancy agreed. "We'd better draw for our hostesses as well as our adjectives. Shall we?"

Lela looked doubtful. "This is awfully crazy," she murmured.

"Of course it is," Frances replied swiftly. "Your insight does us all credit, love. Let's begin."

"Here are some slips," Nancy said, distributing them. "And I'll write the faculty names too. We'll put them in the chocolate peppermint box. Lela, you may draw first, you're so enthusiastic."

Lela drew reluctantly. "I've got the president's wife," she said, sighing. "I knew I should. And my adjective is merry. O girls, I can't be merry ever when I ought to be and especially not with the president's wife."

The girls chuckled. "I wish we could see you," Marian said longingly. "You next, Fran."

Frances drew the name of Mrs. Jackson, the new Latin instructor's wife, and "wise" was the word she read aloud. She frowned heavily on the shrieks that followed the announcement, though her dimple flickered. "Perhaps you think that's not a natural characteristic?" she said severely. "Personally, I think it's a lucky thing that I drew this instead of any of the rest of you."

"You go on, Marian," Nancy insisted. "I'm reveling in my suspense!"

"Mrs. Henderson for me, because I can't have Mrs. Dale," Marian said mournfully. "And I can't bear the atmosphere of Mrs. Henderson's house somehow. My feet get twitchy as soon as I sit down in it. Oh, oh, listen to my slip! Poetical! When I'm the only girl in school who has ignored literature for science!"

"Poetic justice, dear. I chose that adjective," Nan said with pride. She leaned

And she had been reading Theocritus



forward, sparkling, and drawing the last slip toward her, opened it dramatically. "Sombre! Sombre! Marian, love, that's to be my effect on your revered friend! Can't you see her becoming so fascinated that she'll invite me to accompany you on her house party immediately?"

"Think of Nan's being sombre!" Frances gasped. "I'd as soon think of a humming bird being depressed! That's the most ridiculous combination of all."

"Never mind, I'll do it if it annihilates me," Nancy proclaimed. "The melancholy days have come, and I'll act sombre till I'm numb! Sorry if I step into your realm of expression, Marian. Come on, let's hurry."

She fished a hat box from under her bed and pulled her best hat down over her bright hair.

"Wait a minute," Marian said. "Let's all meet here after dinner and tell our adventures."

"Yes," Frances agreed, "and not a word to one another if we happen to meet before that."

"O dear," Lela moaned under her breath. "I can't be merry. Don't you think we'd better not—"

"Don't be a little coward!" Frances urged her affectionately, pulling her out of her chair.

Nancy had dragged her coat out of the closet, her gloves from her desk and was fleeing out into the corridor before them. "Till tonight, oh, merry, wise and poetical confères! Your sombre shade departs!"

That night at dinner in the long hall Lela and Frances side by side kept silence with difficulty. Marian grinned cheerfully at them from her seat at the end of the next table and made queer undecipherable motions with her hands.

"Where do you suppose Nancy is?" asked Lela. "She isn't in her place. Do you suppose she had a dreadful time? I hope she isn't upstairs crying. Something must have happened."

"Heaven only knows what will happen to Nan!" Frances answered with a mixture of delight and despair. "You'll never be able to guess. Maybe Mrs. Dale called up and complained about her to the dean—"

"Oh, you don't really think so?" Lela interrupted her in a worried tone. "I'd feel as if it were half my fault—"

"O Lela, my dear child—Hush, there's the dean talking!"

The dean wished to announce that Professor Pinnick would speak to them for a few minutes on the archaeological discoveries in Central Asia, which he proceeded to do. His few minutes stretched to a half hour, then to three quarters, and the impatience of the girls grew unbearable.

Finally they were dismissed. In the mob round the door, Frances inquired of Marian across intervening heads, "Where is Nancy?"

"I haven't seen or heard of her since you have," Marian replied. "Maybe she'll be waiting for us."

But when they reached the corner room it was quite empty. "Shall we wait a while?" Marian asked. "I hate to have her miss anything when it was all her plan."

Just then they heard footsteps running down the hall, and Nancy burst into the room with her hair flying about her face and her breath coming in short gasps. "Oh, I ran so fast—so you wouldn't be waiting—I'm just breathless."

"Where have you been, Nan?" they all cried curiously.

"Just at Mrs. Dale's. I'll tell you. You



Frances drew the name of Mrs. Jackson

people tell first. I'll have my breath then." She sank down by Marian and gave her a wild hug. "Ooooh! I can hardly calm down. Do go on, somebody, so I won't talk."

"All right," Marian agreed. "It would be better, you're so overcome. Let's take the same order we did this afternoon. You begin, Lela."

"Well," Lela said ruefully. "I can't say my visit was a great success. You know how you feel when anyone says, 'Oh, be funny!' or 'Why don't you talk more?' That was the way I felt about being merry. Mrs. Prexy appeared, and I said, 'How are you today?' with great gayety, and immediately she began on her tonsil operation! Now how could anyone be merry about that without insulting her? I would laugh and murmur, 'Wasn't that odd?' and I told her a story about a humorist and his operation—which she didn't enjoy; I may have left out the point. And then with another glad laugh I said good-by and came home. I really did as well as I could, though, don't you think?" She looked at them inquiringly.

"O Lela, you simply kill me!" Frances protested. "Yes, precious, you did beautifully. Don't lie awake and ponder over it."

"Your turn now, Fran," said Marian.

"Yes, I know. Well, I never had seen Mrs. Jackson, so I didn't realize my peril, except that I knew it was unwise for me to attempt wisdom in any case. But when I met her—my dears, she is the most appallingly learned person I've ever gazed on! Round spectacles with black rims and stiff hair, even a high collar! And she had been reading Theocritus. I saw him on the couch. So I simply skirmished round till I found she wasn't acquainted with modern pageantry, and then I elaborated on that."

"But how did you know about it, Fran?" Lela asked.

"I didn't," Frances said coolly. "Not one thing. But as long as she didn't either I was all right. I spoke of the Russian influence on Badislaus (who happens to be our puppy at home and very bad, by the way) and the allegory the Indians find in the leaves of the hickory nut. I really became so eloquent I'm not quite sure what I did say! But I am sure that I was a great success! When I left she told me it was a pleasure to find such intelligence among undergraduates. I hope she passes her high opinion of me on to her husband. I certainly need it in his class."

Nan had recovered sufficiently to lead in the laughter.

"It really wasn't safe to trust you, Fran," Marian said solemnly. "But I was almost as bad, for as far as being poetical is concerned, I know only two quotations:

Hail to thee, blithe spirit—
Bird thou never wert

And

Under the wide and starry sky
Dig the grave and let me lie.

So I felt rather hopeless when I started. But when I reached Mrs. Henderson's there were other callers, and I got stranded in a corner with a deaf old aunt. She loved to talk to the young, she said; so she did, and I answered her by saying first, 'Hail to thee, blithe spirit,' and then, 'Dig the grave and let me lie,' and we got along beautifully. And when I left I told Mrs. Henderson that her home was like a birch forest at sunset, and then departed, leaving her amazed."

"You imbecile," Frances said, hugging her delightedly; "what if anyone had overheard your remarks to the aunt?"

"They may have for all I know," Marian admitted. "I got so choked with giggles myself I couldn't notice. Sometimes the quotations fitted in so marvelously. She asked me once if I lived here. 'No,' I said, shaking my head violently, 'Under the wide and starry sky.' 'That's nice,' she said; 'is there much for you to do in the summer?'"

"Dig the grave and let me lie," I answered with a languid gesture. "Quite right too," she said approvingly; "you ought to rest in the summertime."

"Hail to thee, blithe spirit!" I exclaimed, nodding my head and beaming at her. "You ought to have been ashamed," Lela protested. "Nancy, are you ready? I'm so anxious to hear about you. I got really worried when you weren't at dinner. Haven't you had any?"

"Oh, yes," Nancy answered nonchalantly. "I had dinner with Mrs. Dale."

"What!" cried the girls in chorus. "Why—how—where—"

"Let me begin at the beginning," Nancy pleaded, taking her accustomed seat on the floor and banking pillows against the radiator. "Now I'm comfortable. No interruptions, please."

"I had a dreadful time calming my face down on the way over to Mrs. Dale's. I'd get so frantically amused thinking about our all starting out that my mouth would curl up before I knew it. But I managed to look wistful as I went up the steps and rang the bell. Then the maid admitted me and called Mrs. Dale, and she came in, so gay and charming that I was crazy just to relax and make friends with her."

"I thought older people bored you," Marian interrupted her.

"Well, I changed my mind as soon as she came in," Nancy explained briskly. "She said she was so glad whenever the girls came to see her, for she liked to keep in touch with school life. I took a deep breath and said, 'Ah, how can trivialities count in blackness?' She looked a little startled, but she didn't follow it up. She asked me about my friends instead. 'What are friends?' I replied sorrowfully, looking at the floor. 'One thinks one has a friend; it may be an assassin with a knife at the throat of one's ideals.'"

"Why, Nancy Lee!" Lela exclaimed, horrified.

"Hush, Lela," said Frances, chuckling. "She wasn't referring to you—to Marian probably. Go on, Nan. It's lovely."

"So she really did look distressed then," Nancy continued, "but she laughed a little and said that was unusual, she thought, and the real life-long friends were often found in school days. 'Hypocrisy is as easy for the young as for the old,' I said, 'and antagonism is prevalent among individuals as among nations. The semblance of love is needed for sordid selfishness.' That wasn't spontaneous; I'd thought it out on the way over. It doesn't mean anything, Lela, but I said it fast and in a heartfelt tone, and in the middle it made me choke, and so I sounded quite pathetic."

"So she changed the subject again and began telling me about her trip to Bermuda. It was really awfully interesting, and I had to try hard not to forget my rôle, for I kept thinking how dear she was to me. Then she was called to the telephone. When she came back I started to leave, but she put her hand on my shoulder and said that her husband had just telephoned that he wouldn't be home to dinner, and she wondered if I wouldn't stay and share it with her if she'd get permission from the dean. Of course I said I'd adore it. And then she had me sit down by the fire with her, and she took my hand and said in such a lovely, half-shy way that she hated to see a young girl feeling sad and despondent, as I seemed to be, when life ought to look gay and hopeful, that she knew how hard loneliness was when you're young, and she wondered if I wouldn't enjoy coming up to her lodge at the end of the month for a week-end and meeting some young people—"

"O Nan! O Nan!" Marian cried. "Why, Nan!"

"Now hush," Nan commanded. "Think how I felt! I felt like a dog. I hadn't wanted to call; I'd planned this silly trick, and I'd joked about getting an invitation from her, and then she offered this beautiful thing to a stranger who she thought was really unhappy, as she had been once. I hated myself. I blushed till my face hurt, and I couldn't say a word. I felt more and more ashamed, and the tears came to my eyes till I was afraid I'd cry. So then I told her all about it."

"Oh, Nan!" Marian sank down in a disappointed heap beside her. "Now it's all spoiled!"

"You didn't, Nan!" Frances exclaimed. "Did she scold you? Was she haughty? What did she do?"

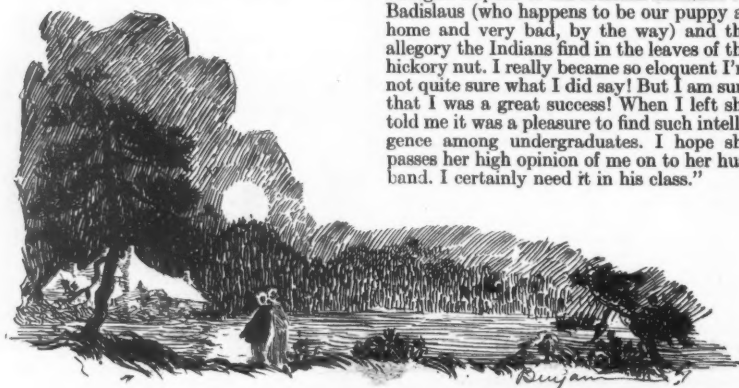
"I know what she'll do," Lela lamented. "She'll think it over and then call up the dean and tell her the whole story. I knew we oughtn't to do it."

"Cheer up, children," Nan said demurely. "She laughed till the tears ran down her cheeks. She laughed and laughed and laughed. She said it reminded her of the things she and her sisters used to do. And then we went in to dinner, and she told me stories about her school days, and she knew Aunt Catherine, and we had such a delightful time!"

"Delightful time!" repeated Frances and Lila in amazement.

Nan smiled and continued: "And when I started to leave she laughed at me again and said wouldn't I come to the week-end party anyway even if I wasn't sombre! Marian, your eyes are like dollars. Do you wonder I was out of breath when I got here?"

Wisdom

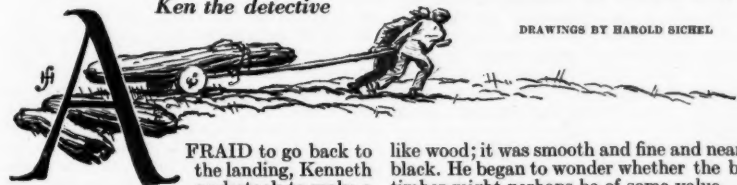


TREASURE SWAMP

Chapter Five
Ken the detective

By Frank Lillie Pollock

DRAWINGS BY HAROLD SICHEL



A FRAID to go back to the landing, Kenneth undertook to make a short cut across the woods. The going proved unspeakably bad; he had to traverse a twisted, tangled jungle of small evergreens with mud and deep moss underfoot, rotted trunks that gave way at a touch and spiky barricades of dead trees. The mosquitoes rose in voracious clouds till he was obliged to smear his hands and face with mud to keep them off. Several times he had to retrace his steps; he lost his bearings and at last after what seemed miles of slow traveling found himself suddenly at the edge of the open space not far from the workshop.

He crept on all fours to the margin and peered through the cedars. No one was round either the workshop or the cabin, but presently he spied the three men on the peat bog. They were carrying a heavy log between them—one of the blackened old timbers dug from the peat; with much apparent effort they brought it up to the workshop and dropped it by the door. They were not twenty yards away; Kenneth could hear their voices. After a moment's discussion they went back and picked up another log. Kenneth was at a loss; what could they want with the wood?

After the men had brought up some half a dozen logs they disappeared inside the building. Presently there was the sound of continuous hammering, and then the power was turned on the saw. Two of the men came out and carried a log inside; the sound of the saw rose to a cutting shriek. Apparently they were sawing up the black timber, perhaps to make some heavy apparatus.

They carried all the logs within, and after a time Lougheed came out pulling a small truck with wheels made from sections of log. The third man went with him, and by means of the truck they proceeded hurriedly to bring up more timber. All the while the sound of the saw continued.

Kenneth would have given anything to know what it all meant. Perhaps it was not the peat after all that interested Williams. What could it be that he was preparing?

The mosquitoes grew almost more than Kenneth could endure. In spite of the mud on his hands and face they seemed to get at him everywhere. The air seemed full of a buzzing, stinging cloud of them, but he managed to bear them hour after hour while the men themselves, tormented by the flies, worked at the logs in furious haste.

They worked till dusk; then they went to the cabin, and smoke presently began to rise from the chimney. Kenneth watched the building narrowly for some time until he was convinced that supper was under way. Then he crept out from his ambush and headed quickly for the workshop, running almost crouched to the earth.

The light was dim inside, but at the first glance he saw that Dick's machinery had been shoved back pellmell to clear the floor. He darted toward the spot where he had left the shells and began to grope for them. There they were! His heart jumped with exultation as he felt the smooth, heavy little cylinders. There were eight of them, and he slipped one into his breechloader at once. Then he looked about. There was a heap of dark sawdust under the saw, and a great pile of dark planking occupied most of the floor. The old timber had been cut into heavy planks about four inches thick and from four to eight feet long. There had not been more than twenty or thirty of the logs on the bog, and more than half the number had been transported to the saw and many of them cut up. Kenneth picked up a broken scrap of the planking and examined it closely. It hardly looked

like wood; it was smooth and fine and nearly black. He began to wonder whether the bog timber might perhaps be of some value.

While he was pondering the matter a noise from the cabin startled him. He bolted back to his hiding place at the edge of the clearing, carrying the fragment of wood with him. He was not much too soon, for within a minute the three men hurried out of the cabin and back to the workshop. It was growing dark, but they collected several piles of dead wood and lighted flaring fires; evidently they intended to go on working in spite of nightfall.

Kenneth, however, had seen enough for the present. He crawled back as silently as possible into the thickets, came round to the trail, which was now in darkness, and made his way back to the river. He stumbled down the shore and recovered his baggage. He could not stop there, the mosquitoes were too thick and savage. He wished profoundly that the rascals had left their canoe at the river. As it was he tried to make his way inland to some better spot. He plunged knee-deep into wet places, fell over logs and tore himself on dead branches, dragging his gun and dunage sack with him. Every place in that horrible swamp seemed equally bad, but at last he came to a spot where the growth was a trifle less dense and the ground drier, and there he dropped gun and baggage and fell flat, tired out.

He was hungry too, but he disliked to make a fire, for he was uncertain how far he was from his enemies. Getting out the provisions, he chewed slivers of raw bacon and morsels of bread. But the mosquitoes would not let him eat in peace. As for sleeping, that seemed impossible. He buried his head in his coat and tried vainly to burrow into the moss; he plastered more mud on his skin, but at last driven to take chances, he lit a small fire and huddled in the thickest of the smoke, almost stifled. Sitting there, he dozed with his head dropping on his shoulders, and at last, overcome with weariness, he slept soundly.

He awoke to find himself lying almost in the dead ashes of the smudge. There was a sharp chill in the air; the sky was gray with dawn, and there were no mosquitoes. He crawled to his feet, feeling years older. All the disastrous events of the preceding day seemed to rush through his mind—Williams and the bog timber—Something stirred in his memory. Where had he heard of bog timber?

Then all at once he remembered. Bog oak! He had seen references to it in Uncle Norman's books. It was a rare wood found sometimes in peat bogs, ancient tree trunks preserved from decay by the tarry peat juices and hardened and darkened with centuries. It was found in Russia and in Ireland and elsewhere perhaps. Yes, and now Kenneth remembered having once seen at a manufacturers' exhibition in Toronto a magnificent sideboard of black, highly-carved wood labelled "Irish Bog Oak" and priced at a high figure. Was this timber bog oak of that precious sort? Evidently Williams thought so. It surely had been, not the peat, but the timber, that he had been after all the time. There might be a couple of thousand dollars' worth in that pile of planking on the floor, for Kenneth had a hazy idea that bog oak was almost as valuable as ivory.

Then it flashed upon him that here was the source of all the capital they should need to finance the bog. The bog itself could supply it! And there must be more of the stuff not yet dug out. There was no need to borrow money or to make contracts. Why, he wondered bitterly, had they not identified the precious stuff before? Now it was lost. Kenneth clenched his fists. He would get it back even at the risk of his life. Williams was making all haste, but it would take considerable time for him to get the wood away. Rafting was the only means of getting it out; the heavy hardwood itself would never float. It would have to be supported, and Williams

would not have enough for a day or two. By that time surely Dick would have returned. As for Lougheed's being the owner of the place, Kenneth had overheard something that cast a new light on the matter.

He ventured to make a tiny fire and broil strips of bacon. There was not much of the meat; he could have eaten it all in one meal, but there was no telling how long he should be in his present predicament; he needed to save it. Across the woods he heard the faint shriek of the saw again, and, all on fire with his new discovery, he started to work back through the thickets to reconnoitre.

The men had carried out the planks from the mill and piled them by the door. Two of the men were still bringing up logs, and within an hour while Kenneth watched the last of the timber was indoors and being sawed up. Towards noon it was finished. After a short discussion, which Kenneth could not overhear, Williams went to the cabin, and the two others took their axes and turned down the trail to the landing. Within a few minutes he heard the sound of chopping. They were preparing to make the raft.

Kenneth was struck with sudden terror lest Dick should return and come upon them unexpectedly. He struggled back for his dunage and made his way down to the river to be sure of intercepting his brother. Two hundred yards upstream the axes resounded, and every now and then Kenneth heard the crash of a falling tree. The air was hot and moist, and the mosquitoes were growing so unbearable that Kenneth at last climbed twenty feet into a spruce tree. At that height the mosquitoes were fewer, and moreover he commanded a view down a long part of the slow, broad stream. In that spot he spent most of the afternoon, climbing up and down now and then to relieve his cramped limbs.

All the afternoon the axes had resounded, and when they ceased in the dusk Kenneth ventured to scout up to the landing to see what the men had done. He found more than a dozen logs of dead spruce, cut about twelve feet long and secured to the shore undoubtedly for the frame-work of the raft. He meditated casting them adrift to delay operations, but decided that it would not help much and might get him into deeper trouble. He was growing acutely anxious about his brother's return, and he watched the river as long as he could see before he went back to the place where he had spent the preceding night.

This time he made a smudge at once and utilized it to scorch a few scraps of bacon. The night passed much like the previous one. The next morning he finished the bacon for breakfast. He had not a scrap of food left, but he had his eight shells and felt sure of being able to pick up a duck or a partridge.

He heard the renewed sound of axes even before the sun had risen, but it was hardly likely that the men could complete the raft that day. He made his way painfully down the shore for nearly a mile and then began to look for game, which was usually plentiful enough. He had started several ducks on the way, but now nothing presented itself. He stumbled and plunged through that abominable swamp for hours, he sat motionless on a log, devoured by mosquitoes, but never caught sight of so much as a squirrel.

He was sitting thus watchfully beside the river when he spied the canoe far off. He watched in a fever of anxiety till he recognized his brother; then as the canoe came opposite he hailed him.

Dick started violently, stared and then brought the canoe to shore. "What are you doing here, Ken?" he cried. "And what on earth has happened to you?"

For Kenneth was almost unrecognizable; his face, swollen with mosquito bites, was haggard with exhaustion, smeared with mud and blackened with the smudge smokes.

"Don't go any farther," said Kenneth, getting aboard. "Let her drift and I'll tell you. Thank goodness you've come! Got anything to eat?"

Dick handed over the remains of a plentiful luncheon, and while Kenneth ate ravenously he managed to tell between mouthfuls the story of his expulsion from the cabin.

"The murderous scoundrel!" exclaimed Dick furiously. "He ought to be hanged for that! He meant to kill you. All the same, Ken," he added, subsiding a little, "I'm

afraid he's right about Lougheed. I don't quite understand it, but there's a district land office at Hawthorne, you know, and I had this homestead looked up. It really is a South African War grant, and it's in the name of Edward Lougheed just as Williams said. Uncle Norman's name doesn't appear at all."

"I'll tell you something about that," said Kenneth, considerably strengthened by his meal. "But first, how did you get on with your coke?"

"Bad—and good," replied Dick. "I saw the manager of the smelter, and he was very decent. He looked at my fuel and tried it and seemed to like it. He said it might not do for smelter work,—he couldn't say from so small a sample,—but they would certainly be able to use plenty of it in one way and another, and my price was all right. But he wouldn't hear of a contract. He asked me all sorts of questions—how old I was and what plant we had and what financial backing, and then he laughed. He said they were ready to buy the fuel, but they couldn't think of making a contract unless we were responsible and in a position to deliver the goods. So that ended that plan. I've been thinking we'd better try to find another peat bog, since it seems we've no rights here—"

"Listen," Kenneth interrupted him. "Williams has his man Lougheed with him, as I told you. Now I could overhear some of their talk from the woods, and a dozen times I

Kenneth at last climbed twenty feet into a spruce tree



heard them call the man Jim and not Ed. And he's supposed to be a veteran of the South African War. That war has been over twenty years. This Lougheed certainly isn't a day more than thirty. He'd have been about ten at the time of the war—pretty young for a veteran, eh?"

Dick stared and then with a violent exclamation smote his hand on the side of the canoe. "It's a fake then! I might have known it! This Williams has a bad reputation; I heard about him at Cedar Lake. I'll bet this is Uncle Norman's ranch after all—somehow—I don't know how. But that doesn't get us out of the problem of raising capital," he added dismally. "You had a lot of grit to stick it out as you did, but I don't see anything for us."

"Hold on!" said Kenneth. "You haven't heard half of it. We can get the capital all right. Do you know anything about bog oak?"

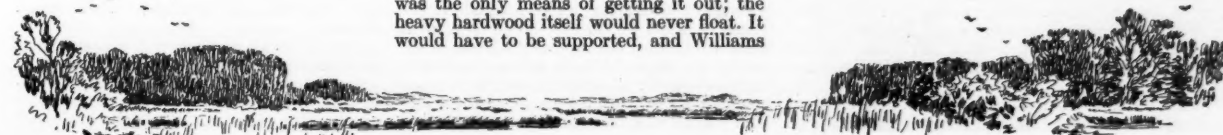
"Bog oak!" repeated Dick. He glanced swiftly at Kenneth's face and caught the suggestion like a flash. "Why—why, Ken, you don't mean that those black old logs back there—"

He checked himself. The sound of men's voices and a splashing in the water became faintly audible from round the curve in the river just above them.

"Quick! Out of sight!" whispered Kenneth, grasping a paddle.

Luckily the canoe was drifting close to the shore, where long cedar branches drooped heavily over the water's edge. The boys had barely driven the canoe behind the screen when a mass of floating timber nosed round the bend, and the raft floated ponderously into sight.

TO BE CONTINUED.



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Owen D. Young
Transfer Agent under the Dawes plan

FACT AND COMMENT

THE BEST RULE OF THE ROAD is the Golden Rule. Always drive as you wish others to drive.

The Maple Leaf and Summer Butterfly, How lovely are they just before they die!

TEACH YOUR CHILDREN that home is a place where everything should be pleasant, and you will have taught them one of the most valuable lessons in life.

SECRET-SERVICE AGENTS at New York City have seized a remarkable rug that a Greek merchant brought in on the liner King Alexander. It is six feet long by four feet wide and in color and design resembles a silver certificate. Finely woven into it are portraits of Lincoln and Grant. The agents explain that it is illegal to make anything that resembles currency.

AN INGENIOUS LOCKSMITH of Belgrade has invented a machine for exterminating mosquitoes; it is a strong searchlight that lures them to their doom. At the apex of the conical light projector is a hole through which pumps and fans suck the mosquitoes by thousands. Experts who watched a demonstration say that the invention is too expensive to be practical, but perhaps it might have a place as community apparatus.

ONCE EVERY YEAR, seldom for longer than a month and a half, the women and children on the farms in Japan turn to silk culture for pin money. Silk is their "velvet" crop. Except the cost of fertilizer for the mulberry trees that the worms feed on, the industry requires little or no outlay. A year ago Yokohama, then the premier silk port of Japan, was almost obliterated by the earthquake. Now it has virtually recovered its chief business, which is exporting silk.

JOHNS HOPKINS UNIVERSITY has undertaken to establish a school of international affairs in memory of the late Walter Hines Page, our war-time ambassador to the Court of St. James's. The need for such a school to prepare men thoroughly for the diplomatic and the consular service is generally admitted. Now that the Rogers Act has made that service especially attractive to young Americans competition for appointments will be keen, and only the well-trained men can hope to win.

"OWING TO A SEVERE STORM the surf was so dangerous that the authorities forbade bathing from the beach. The young woman, however, a strong and courageous swimmer, insisted on putting on her bathing suit and entering the water. She was caught in the undertow, swept out to sea and drowned." So reads the newspaper dispatch. How many fine young men and women, now dead, would be alive today if good swimmers were as ready to use their reason and common sense as they are to display their strength and courage!

A REVOLVING HOUSE has appeared in Germany as the result of severe housing conditions. The house, or perhaps we should say the apartment, consists of a single large room one side of which is occupied by a circular revolving platform divided into three parts by partitions that radiate from the centre. When the occupant gets out of bed in the morning he presses a button, and the platform carries bed and dresser out of sight and brings the breakfast table into view! Pressing another button brings round the living

room. Occupying a cell shaped like a piece of pie doesn't strike us as an especially attractive proposition. "Compartment house" would be a good name for the new architectural horror.

AN INTERNATIONAL HIGHWAY

WHEN the Panama Canal was completed ten years ago Viscount Bryce called it the "greatest engineering achievement of history or of prospect." The years have done nothing to make that tribute seem overenthusiastic. Rather have they increased our wonder at the thoroughness and ability with which the work was done.

It was originally predicted that the canal would be useful chiefly as a naval project, and that it would be a long time before the traffic that it carries could compare with that which passes through the Suez Canal; but within the ten years it has overtaken and passed it. Last year almost thirty million tons of cargo passed through the Gatun Locks, and more than twenty-four million dollars was collected in tolls. About five thousand vessels will use the canal this year, and the number grows steadily.

Almost every variety of cargo is to be found on the ships that enter the canal at Colon or at Balboa. Oil is the chief article, and manufactures of iron and steel come next; but every product of the Orient, tea, spices, silk, camphor, rubber, sugar, nuts, and copra; nitrates, iodine and copper from South America; fruit and vegetables from California; cotton and metal goods, machinery and chemicals from the factories of Europe and America—all meet and pass at Panama. The greater part of the traffic is "coastwise"; that is, it moves from our own Atlantic coast to our own Pacific coast, or vice versa; but the trade that is entirely international is large enough by itself to show a profit above all the expenses of operating the canal. In 1923 there was a profit of nearly \$13,000,000. This year it will be considerably more.

The President has lately set aside by executive order additional land in the Canal Zone, which is to be made into a reservoir for holding back a still larger amount of water from the Chagres River. The new reservoir will supply water enough for the growing needs of the canal during the next thirty years. By that time some authorities think we shall have to build another parallel canal either at Panama or in Nicaragua to take care of the steadily increasing traffic.

Quite as wonderful as the success of the canal itself is the achievement of the sanitary engineers. Their work has been praised so often that we need not do more than recall the fact that, if they had not conquered the filth and the infection of the Canal Zone, the canal could never have been built. By turning a fever-stricken pesthole into a spot so clean that it may fairly be described as a health resort they won a triumph in sanitation that brings the highest honor to American enterprise and intelligence.

OUR RED NEIGHBOR

MARS has approached, made its bow to the earth, as it does every fifteen years, and retreated again into the background. The astronomers, with instruments more powerful and delicate than ever, have made certain observations that give them a clearer idea than they had before of the surface of Mars and the curious markings upon it. They have increased their knowledge of its atmosphere, and they have material for a little more theorizing concerning the conditions that prevail on the sister planet. They have learned that its mean surface temperature is 48°—about that of northern New England,—but they cannot be said to have learned anything more about the existence of life on Mars, and that is the question in which the world is most interested.

The difference of opinion on that point among astronomers of the first rank is curious. We all know how sure the late Percival Lowell was that the "canals" of Mars were ribbons of vegetation following artificially constructed water courses—which of course implied highly intelligent life. Camille Flammarion, the venerable French astronomer, is no less convinced that a form of human life exists on the planet, and he thinks the Martians are happier and more intelligent than we, because their planet is older and progress is an eternal law, and because, owing to the

lessened pull of gravity on the smaller body, weight is less and the Martians are comparatively free from the tyranny of matter.

Other eminent astronomers warmly dispute those conclusions. They say that Mars is an arid waste on which the daily extremes of heat and cold are so great that no life, unless it be coarse, funguslike growths, can exist. They think the canals are partly optical illusions and partly traces of great geologic rifts in the baked and frozen surface. Between views so diverse what shall the uninstructed but curious layman believe?

There is clearly water vapor on Mars. Clouds have been seen, and polar caps, presumably of ice, have been observed. There is air there also, though the best judgment is that there is less of it on the surface of the planet than there is on Mt. Everest. Those conditions, together with the difference in the force of gravity, unite to make life, if it exists, strangely different from anything we are familiar with.

If there are any mountains on Mars, no one has discovered them. There are dark patches here and there that one astronomer calls seas, another continents or islands, and another cloud-shadowed areas of indeterminate surface. The absence of mountains is strange, for they are evidences of geologic forces that would presumably act on one planet as well as on another, once a solid crust had been formed.

Mars presents all the elements of a fascinating astronomical problem, and we can safely assert that the latest approach of the planet to the earth has not added much to our precise knowledge. The problem still remains; the great red star still wraps itself in mystery.

FOLLOWERS

IT is no mean thing to be a true and loyal follower; to attach yourself heart and soul to a man or an organization that expresses your thoughts on fundamental principles better than you can express them, and that can point out ways of realizing your ambitions that you, unaided, could hardly have discovered. Anyone would of course rather be a brilliant leader, and because of that universal preference the ranks of the true and loyal followers have seldom been overcrowded.

The trouble that most of us have is in discovering the leader or the cause that shall inspire us with confidence and enthusiasm. We like certain things about one leader, but we must reject other things for which he stands. We should be glad to support a certain organization were it not that it is pledged to accomplish some things of which we disapprove. How is it possible then to attach ourselves heart and soul to any leader or cause or organization? How can we be loyal followers of anybody or anything?

Indeed, because of the conflict and complexity of issues, there seems today more than at any other period within memory a discouraged sense of the impossibility of choice: people stand bewildered and uncertain. It is all the more necessary therefore that everyone should do his best to get sound information and to think down to the fundamentals of the problems that confront the community, the state, the nation and the world. Each one must decide what are the most vital issues and who of the various claimants to leadership holds right views on the greatest number of those issues. Perhaps the true and loyal follower will have to do in the next few years more pushing and guiding than he has hitherto modestly felt was required of him.

MUST LAUGHTER DIE?

IN the words of a popular newspaper humorist, "Some one is always taking the joy out of life." Now comes an eminent philosopher, a professor in a university, to tell us that the time is coming when the human race will laugh no more. Primitive man, he says, did not know enough to laugh, since wit or the appreciation of the humorous involves a considerable amount of intelligence. Man of the future will know too much to laugh.

Laughter, he points out, arises either from a sense of incongruity or of inequality. We laugh at what we do not understand or at what we find for the moment inferior to us; but in the blessed future, when mankind is occupied chiefly in serious scientific or social thought, there will be little inequality, and men will be wise enough to see through and

explain every incongruity. Already jokes are kept alive only by professional humorists; men and women rarely laugh spontaneously. Life is too serious a thing to amuse us any longer.

A discouraging outlook, isn't it? Still, there are considerations that brighten it somewhat. For one thing, the diligent professional humorists will probably keep laughter alive during our time at least; and, since philosophers notoriously disagree within their own sphere, this particular philosopher may be quite wrong. It will be difficult to abolish all the inequalities, and it is hard to imagine the entire race so far absorbed in sober scientific thought or social theory as not to be amused at the spectacle of a stout man chasing his hat through a mud puddle or at the delightful absurdities of Sir John Falstaff or Mr. Samuel Weller.

However, we must confess that we laugh less easily and less uproariously than the men of old. The Greeks had a myth that Jupiter after his birth laughed incessantly for seven days. That is the kind of idea which would occur to no one nowadays. So much laughter would be thought undignified. No one since Rabelais could have imagined it. Then we are told that Calchas, the soothsayer that Homer knew of, died of laughing at so poor a joke as the unfulfilled prediction of another man. They had a childlike capacity for laughing at nothing, those old fellows, and a robust willingness to keep on laughing so long as there was nothing else to do. We cannot help envying them, although we know so much more about biology and psychology and chemistry than they knew.

Yes, the more we think about it the more we are inclined to agree that laughter is less common, less spontaneous, less hearty, than it used to be, and that there is an increasing number of people who do not laugh at all or who laugh rarely. That seems to be the price we pay for growing elderly and learned, either as individuals or as a race. But so long as youth and high spirits are left in the world, together with something ridiculous here and there for them to observe, there will always be a saving ripple of laughter to be heard; at any rate we hope so. A world quite without laughter would be intolerable for everyone except philosophers and scientific thinkers—and it would be intolerable for most of them.

BEHIND THE CURTAIN

AT the Institute of Politics, held as usual this summer at Williamstown, Massachusetts, there was a great deal said about the Russian Soviet Republic; and—again as usual—the eminent men who discussed the subject differed fundamentally. It is impossible to be sure just how firmly seated the Bolshevik government is, just what is the attitude of the peasants toward it, just how much success it is having in stimulating the production both of food and of manufactured goods, just what progress it is making in uprooting religion or in spreading Bolshevik doctrines among the peoples that touch Russia, particularly on the Asiatic side. One man who has especially direct information on those matters tells us one thing; another, who has had equal opportunities for learning the truth, tells us something quite different. One man is urgent for us to make a commercial agreement, even if we have no political understanding with the soviets; another tells us that such a step would be folly. We cannot even be sure whether the government is swinging toward a stricter or toward a more lenient Communism, though the weight of evidence seems to us to show that the present governing clique is less supple and opportunist than Lenin was and more inclined to insist on a thorough adherence to the Communist theory at all costs.

One thing is certain: there is no broadening of the political base in Russia. The Communist party, which still administers the government, remains a mere handful of the people. New members join, but old members fall away or are purged away. The temptations of power have seduced a great many Bolsheviks. There has been much backsliding, and, since the leaders are still earnestly bent on Communist reforms, they have again and again "cleared out the deadwood" that was bringing discredit on the soviet régime.

Almost every member of the Communist party is an officeholder. The "dictatorship of the proletariat" is a name rather than a fact. Hardly anybody in the proletariat has any power. The Communist intellectuals are

managing affairs in the name of the working people, but, whether because they do not trust the workers or because they do not wish to surrender the power they now hold, they are very cautious about increasing the membership of the party.

In the local soviets non-Communists are often in a majority, but the Communists take the lead in all action, and the government invariably supports them. There is no such thing as legislation, properly understood; the soviet congresses are merely ratification meetings that do little except listen to and applaud Communist orators. Almost everything is done by executive order, and the orders often come not from the nominal ministers and commissars but from the inner circle of seven—the Politbureau—that controls the Communist party and the Third Socialist Internationale.

Of the seven, one, Trotzky, is more or less under a cloud. His comrades fear his ambition and his brilliancy, and they remember that he was not an original Bolshevik. Lenin brought him over only about the time of the revolution of November, 1917. The others are Rykov, the premier, chosen because he was almost the only conspicuous leader of real Russian blood; Stalin, a clever, energetic Georgian, the most forceful man of the lot; Zinoviev, a fluent, magnetic speaker, the head of the Leningrad soviet; Tomsky, the nearest thing to a labor-union leader; Bukharin, the writer and official editor of the circle; and Kamenev, the president of the Internationale and a brother-in-law of Trotzky. Most of these men bear pseudonyms adopted to conceal the fact that they are not of Russian blood.

That these men administer a de-facto government of considerable energy, to which the people at large submit, on the whole cheerfully, seems to be the fact. The difficulty that other nations have had in dealing with them lies in their unwillingness to accept the diplomatic responsibilities of a going government and in their frank determination to compass if they can the overthrow of all the other governments of Europe and America.

The Editor's BULLETIN BOARD

THE AUTUMN NUMBER

Next week's issue of *The Companion*, that of September 25, is the Autumn Number. The Historic Milestone Cover is from a painting made expressly for *The Youth's Companion* by F. C. Yohn. The subject is the Treaty of Greenville, made between General Wayne and the Indians. That treaty brought to the young nation a large part of the territory now forming the states of Ohio, Indiana, Illinois, Michigan and Wisconsin.

The stories and articles are of unusual quality and appropriateness. They include the Magic Chest, a story for girls by Marguerite Aspinwall; Wally Gets a Bird, a boy's story of the autumn woods; Grandma Bean's Bread, a laughable tale of "fair time"; a chapter of Mr. Pollock's serial, *Treasure Swamp*; and *Hunting in the Pennsylvania Woods*, by L. E. Theiss.

CURRENT EVENTS

CUBA too is to have a presidential election in November. President Zayas, although he had already received the nomination of the Popular party, withdrew from the contest a few weeks ago, and the campaign will be fought out between the Conservatives, who have nominated former President Menocal, and the Liberals, whose candidate is General Machado. President Zayas announces that his administration will be neutral, but his party will probably make local agreements with one party or the other in order to assure the election of its candidates for Congress.

THE Democratic primary in Texas resulted in the nomination of Mrs. Miriam Ferguson, and, as a Democratic nomination in Texas has always been equivalent to an election, we may look forward to seeing Mrs. Ferguson inaugurated

next January. She will be, of course, the first woman to hold the important office of governor, and that alone will direct the attention of the country to her and her administration. Mrs. Ferguson is not a politician by choice and has never before held office. As we recently explained in this column, she entered the canvass to accomplish the political rehabilitation of her husband, who while he was governor was impeached and removed from office. During the course of the campaign the Ku-Klux Klan issue was raised, and in the final primary Mrs. Ferguson was the acknowledged candidate of those voters who are opposed to the Klan.

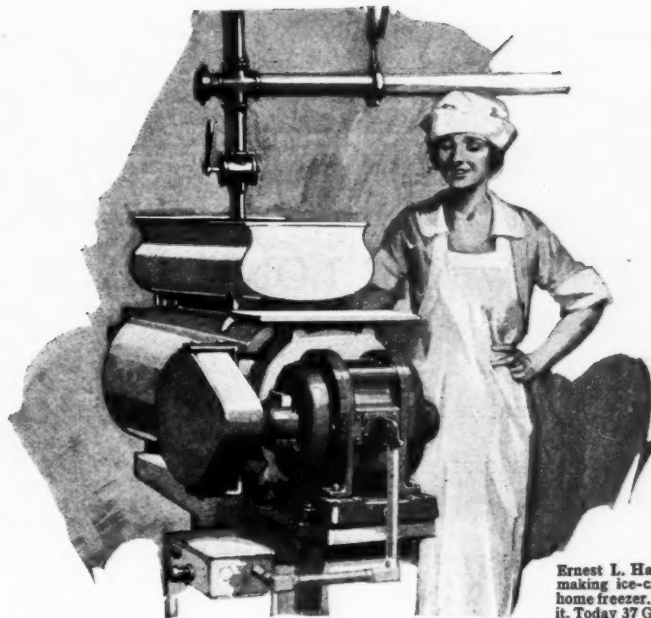
IT is announced from Paris that Mr. Owen D. Young, one of the three Americans who drew up the so-called Dawes plan for reparation payments, will be the first Transfer Agent under the plan—supposing of course that both France and Germany ratify it by parliamentary action. Mr. Young will not fill that important post permanently, but he will hold it until he has organized the system through which the money accumulated in Germany for the payment of reparations shall be transferred to the countries to which it is due. It is understood that he will be succeeded by Mr. Seymour P. Gilbert, Jr., who has been Undersecretary of the United States Treasury.

LAST week General Pershing, having reached the age of sixty-four, was placed upon the retired list of the army. His services have been so extraordinary, and he retains his vigor of mind and body to such a degree, that it was suggested last year that he be kept permanently on the active list, as Admiral Dewey was kept on the active list of the navy; but Congress omitted to take any such action, and his retirement is compulsory by law. General Pershing carries with him into private life the admiration and gratitude of the nation of which he has been so distinguished a servant.

AT a recent meeting of the World Power Conference in London the honorary chairman of the board of directors of the General Electric Company, Mr. E. W. Rice, Jr., made the interesting suggestion that there is an extraordinary and virtually inexhaustible source of power in the internal heat of the earth. He believed that Sir Charles Parsons's idea of boring a great hole ten or twelve miles deep at some suitable place was entirely practicable, and he added that, whatever was the amount of heat and power so released, the knowledge that such an investigation into the interior of the earth would give us would be quite worth the expense, which would be less than that of building a single battleship. In the volcanic regions of Italy the same idea has been successfully tried, and natural steam from the borings is converted into mechanical power.

THE tumultuous opposition of the Communists to the carrying out of the London agreements and the action of the extreme German Nationalists in opposing all legislation intended to carry those agreements into effect show how determined the extremists of both sides are that there shall be no peaceful settlement of the troubles of Europe. The Communists would like to see the misery and chaos prolonged, in the hope that in the end the nations would turn to Communism as a last resort. The Nationalists in Germany, and to a less degree in France, object to any friendly understanding with their old enemies. Nothing could better testify to the sensible and hopeful nature of the Dawes plan than the hysterical hostility toward it of both those factions.

PLYMOUTH ROCK, so we learn from scientific investigation, is itself an immigrant. It was brought down from Canada during the last ice age on the bosom of a glacier and when the glacier melted was deposited conveniently for the subsequent use of the Pilgrims. It is a boulder of "biotite granite with altered plagioclase feldspar," if that interests you. At the same scientific gathering where the history of Plymouth Rock was sketched Dr. Kunz of New York referred to the diamonds that are occasionally found in the glacial drift in our central states. He believes that diamond mines of considerable value will be discovered in northern Canada when the course of the old glaciers has been accurately traced.



Ernest L. Haines began making ice-cream in his home freezer. People liked it. Today 37 General Electric Company motors make a thousand gallons for him where the hand freezer made one.

Where cleanliness counts most of all

Electric motors are clean workers. The ice-cream plant of E. L. Haines, Inc., at Lynn, is as spotless as your tablecloth. The cream is never handled; all machines are enclosed.

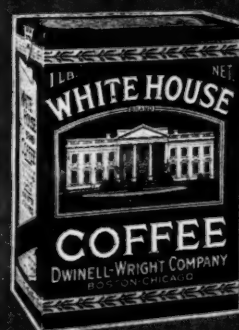
And G-E motors are economical workers. Mr. Haines' bill for current is less than 2 cents per gallon of cream.



While the price of almost everything else has advanced, electric current costs no more than before the war. Let electricity—this powerful, inexpensive worker—do more for you.

GENERAL ELECTRIC

Under any circumstances
your enjoyment of a meal
is infinitely more complete
with



White House Coffee

At home, in the woods, with company or without, a cup of superb "White House" makes the meal complete.

White House Teas defy comparison. They are our own private blend of the finest teas of the Orient. In 1/4, 1/2, 1-lb. sealed canisters.

DWINELL WRIGHT COMPANY

Principal Coffee Roasters BOSTON—CHICAGO



THE VERY LONG RACE OF MY NURSERY FRIENDS

High on my nursery wall they
run,
On and on in a row;
A goose, a dog and a little
brown bear
And a cat with an orange
bow.

By Bessie

H. Doogue



High on my nursery wall they
run,
On and on in a row;
A goose, a dog and a little
brown bear
And a cat with an orange
bow.

WHEN KENNETH'S GRANDFATHER WENT TO BED EARLY

By Frances Margaret Fox

WHEN Kenneth's grandfather was a little boy he lived on a wilderness farm in the northern part of the country. He was a merry, whistling sort of little boy, though he had to work hard even when he was a little fellow. All boys expected to work hard in those days, because there was so much to do. Before farmers could plant corn or wheat they had to cut down great forest trees; after that they had to dig out the roots and burn them with the logs and branches in great bonfires.

The little boy who became Kenneth's grandfather worked hard and enjoyed it, all except going to bed early. In those days nearly all fathers and mothers used to say cheerfully to their children:

"Early to bed and early to rise,
Makes a man healthy, wealthy and wise."

The little boy—who of course didn't know then that he would ever be Kenneth's grandfather—didn't like to hear anyone say those lines. Every night he had to be told to go to bed. His mother had to say, "Come, come, it is bedtime."

But there came a day when the shining sun looked in at the western window of a log house and found a little boy in bed hours and hours before the Man-in-the-Moon could get up for the night. That little boy was Kenneth's grandfather, and no one had told him to go to bed so early. For once in his life while he was young he wished to get into his little bed and cuddle down under the blankets before the cows were milked, before supper time, before the chickens went to roost, before any creature in all the wilderness went to bed. He wasn't sick either, but something had happened that day that made him think that the only comfortable place in the world was his own bed. This is how the surprising thing came about:

Kenneth's grandfather was coming home through the woods in the afternoon one Saturday. He was whistling as usual and not dreaming of danger. Suddenly he heard a wailing cry far behind him—a cry that he thought sounded like a wildcat.

The little boy began to run. After a few minutes, as he didn't hear the cry again, he looked over his shoulder. It is a wonder that he didn't fall, because, creeping up behind him, was a panther—a long, hungry-looking beast.

The little boy ran as fast as he could, but the panther too began to move faster. Kenneth's grandfather did some quick thinking. He had heard the men say when they were telling wild-animal stories that, if a panther chased you, the thing to do was to throw clothes to him. So the little boy yanked off his coat and without stopping threw it behind him.

Sure enough, the panther stopped long enough to smell the coat and then tore it to pieces. The little boy then pulled off his blouse and tossed it behind him, and after that his little shirt, and then even his

They never get tired, though
nobody wins;
The goose is always
ahead.
They're there in the morning
and all day long
And at night when I'm tucked
to bed.

And I think every night that
they scamper down,
Come into my room and
play,
But when I'm awake in the
early morn
They are back on the wall to
stay.

trousers. Everything he took off the panther stopped long enough to sniff and paw and tear to pieces before he came on again after the little boy, who was still running.

The boy won the race. The panther was still in the edge of the woods when an almost naked child ran up the path to his own house, banged the door open, slammed it quickly shut and then jumped into his own little bed and pulled the covers over his head.

When the little boy's father went to talk to that panther about his being so impolite he found only huge tracks in the soft earth and rags of small garments along the trail.

The little boy didn't get up again for two days, which is the part of the story that makes Kenneth laugh. When he did get up and get dressed he told the younger children in the family that the reason he went to bed so early that day was because he was chilled through; that was all.

SAMMY SCOOT'S FRIEND

By Winifred Kirkland

IN a certain city there is a park, and in the park a beautiful road a mile long where automobiles cannot go because the road is kept for horses and ponies.

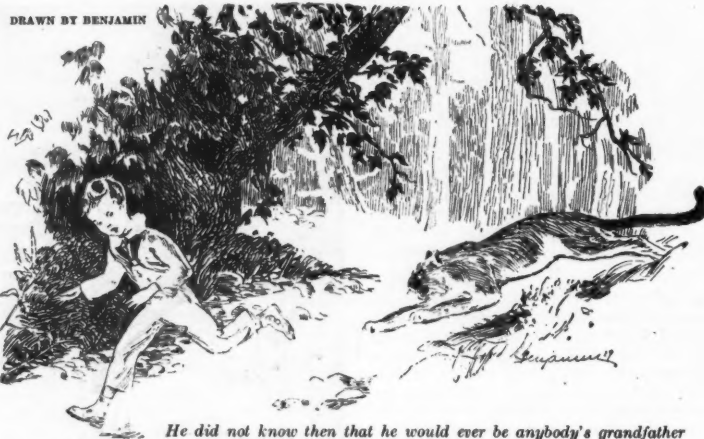
All day long people ride on the road as if they were parts of a long procession. Sometimes the horses go slow-slow, tap-tock,

out they must all go, so that the gates of the park may be closed. Every night the gates are fastened tight with a great padlock.

Different persons come and go in the park, but there are two who are there every day. One is a policeman, and the other is a squirrel. The policeman is tall and good-natured. He wears a bluesuit with brass buttons so bright that even when he is far off you can see all six of them on the front of his coat shining like six little suns. And he wears a white cap, very clean, and white gloves, also very clean. He knows all the children on both sides of the high iron park fence. His name is Mr. Mike McGee. It seems a pity to think that such a good-natured policeman should have anything to trouble him.

The other person who stays all the time in the park is a squirrel. He is gray and lively and bright, and he has a big bushy tail. He jumps from branch to branch so fast that when Mr. Mike McGee comes rushing along on his shining bicycle the squirrel, whose name is Sammy Scoot, can go even faster. And like the policeman Sammy Scoot had a trouble.

Now, living with their troubles made Sammy Scoot and Mr. Mike McGee a little sad even in the park. Their troubles were different, but they had the same effect.



He did not know then that he would ever be anybody's grandfather

tap-tock; and sometimes they go quick, quick, tappety-tock, tappety-tock. Sometimes a little pony feels so gay that you can hardly hear its little feet touch the ground, tock-tock-tock-tock!

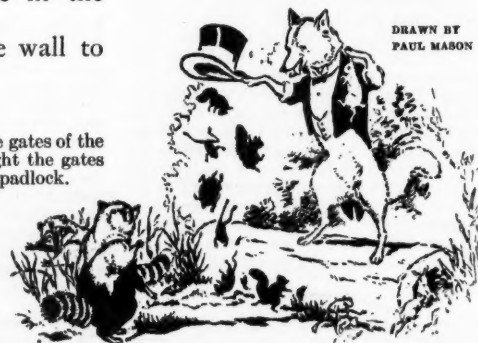
All day the riders move along the beautiful road until the clock strikes seven; then

They made those who had them unhappy.

Sammy Scoot's trouble was as long as his fluffy tail. It was that he was afraid some one would throw a stone at him some day and break his beautiful tail. Mr. Mike McGee's trouble was that he was afraid he should lose his job.

THE MAGICIAN

By Arthur Guiterman



DRAWN BY PAUL MASON

*A Fox with no intention to deceive
And positively nothing up his sleeve
Produced a long-eared rabbit and a
turtle and a rat*

*With half-a-dozen pollywogs and squirrels
from his hat,
Which isn't very easy, I believe.*

"How splendid!" cried the mischievous Raccoon;

"I never saw the like beneath the moon!"

*And now let's see you catch the lot and
put them back again!"*

The Fox replied, "I'll do it!" but forgot to mention when.

Perhaps he means to do it "pretty soon."

Things went on in the park much as usual for some time, though every now and then Mr. Mike McGee became still more afraid he should lose his job, and Sammy Scoot began to fear still more that his tail would be broken.

Then one dreadful day Sammy's trouble really came to pass. A boy threw a stone that broke Sammy's beautiful tail. When Mr. Mike McGee rode up on his shining bicycle Sammy Scoot fell down, down, down through the oak branches. The policeman jumped from his wheel when he saw Sammy Scoot coming, and off came his clean white gloves. He held Sammy Scoot in one hand and drew his white handkerchief out of his pocket with the other. It was a fine handkerchief that his three little boys had given him at Christmas, but Mr. Mike McGee tore it into strips. Then he found two straight twigs and made splints for Sammy Scoot's broken tail, and he bound them on with strips of his handkerchief. It didn't look much like the beautiful gray tail that used to spread out all big and fluffy and keep Sammy Scoot from falling from the tree tops. All bound up in that way it looked more like a white rat's tail than a squirrel's.

Sammy Scoot felt so sick from his hurt that Mr. Mike McGee put him into his pocket to keep him safe and comfortable,

WINTER

By Margaret C. Lysaght

Gaiters and leggins and Teddy-bear suits,
Mufflers and mittens and high rubber boots;
Get them all ready and give a loud cheer,
For I've just seen a snowflake, and winter is here!



and for one week Sammy had to stay there before he began to feel better. He had to keep pretty quiet for a month, until at last his broken tail was entirely mended. He was still feeling weak when he left Mr. Mike McGee's pocket and went back to his life in the tree tops. But every day at eleven o'clock in the morning he went to the pocket and found it full of nuts that Mr. Mike McGee and his three little boys had put there.

Soon after Sammy Scoot went back to the trees Mr. Mike McGee's trouble came. It came so close that Sammy Scoot saw it. The trouble appeared like two big men with eyeglasses and wise looks. They looked under a park bench and saw a paper that Mr. Mike McGee had been too busy to pick up. They looked at the flower beds and decided that there should have been a hundred roses where there were only forty. They looked dissatisfied. They were inspectors, and they had the power to take away Mr. Mike McGee's job. If Sammy Scoot had known that, he would have been frightened, but, being only a squirrel, he did not know it.

But Mr. Mike McGee knew. He knew very well what it means to have inspectors with glasses and wise looks going through a park. He knew so well that when he came riding up and saw the inspectors he did not see Sammy Scoot.

Now Sammy Scoot saw Mr. Mike McGee and was ready for him because, since it was eleven o'clock in the morning, it was exactly the time when the big blue pocket was full of nuts. So Sammy Scoot dropped from an oak branch right down on Mr. Mike McGee's big blue shoulder and ran to his big blue pocket and began eating not far from the bench where the inspectors sat.

The inspectors inspected Sammy Scoot and his fluffy tail and his big appetite, but Sammy Scoot did not know that they were watching him. Mr. Mike McGee knew it and did not care.

Soon the first inspector began to smile, then the second inspector smiled too. Then they both smiled together.

"A policeman who is good to a squirrel will be good to children," thought the first inspector.

"Mr. Mike McGee is a man to be trusted; that squirrel trusts him," thought the second inspector.

When Sammy Scoot and Mr. Mike McGee had time to look at the inspectors again they saw that the disagreeable look had left their faces and flown over the park fence and taken Mr. Mike McGee's trouble with it. It did not look as if he were ever going to lose his job.

If you ever go to that park, you will find the beautiful mile-long road. You will see a big policeman with six brass buttons, and

away up in the branches of the oak trees you will see a flying, fluffy gray tail and a quick gray body and two bright black eyes. Nearer and nearer the little squirrel will come, until plunk! an acorn will fall on your cap. Then you will look up and see Sammy Scoot, looking down at you with his head on one side and his tail curled over his ear.



THE LOST DOLL

By Minnie Leona Upton

IN a big square white house with green blinds lives a little pink-and-white, yellow-haired, blue-eyed girl named Susie Pratt. She has a large number of dolls of all sorts and sizes, but the one that she likes best is a chubby little bit of a doll named Adeline. Adeline is only about six inches tall, but she has plump arms and legs, a sturdy little body and a smiling little face as round as a silver dollar. Perhaps her complexion is what makes Susie think so much more of her than of any of the rest of her large family. It is just the opposite of Susie's and of the other dolls. They are all the blondest sort of blondes, but Adeline has black curls and shining black eyes. Their lips and cheeks are pink, hers are holly-berry scarlet. But then again it may be her amazingly sweet smile that makes her the favorite.

Anyway she is the favorite. And one day when she was missing Susie was so worried that she could not think of anything else. High and low she searched for Adeline, but no Adeline was to be seen. She looked under all the chairs and tables and sofas. She shook up all the cushions on the sofas and chairs. She ran and looked in the hammock. She even looked into her own bed, all freshly made up, as if Adeline, feeling the need of a nap and not finding Susie, had gone and crept into bed all by herself. Susie had been stoning raisins in the kitchen when Adeline disappeared.

Grandmother and grandfather were interested of course, and they searched everywhere they could think of. Even mother helped, busy as she was that morning. And of course Tip helped; he wagged his funny little tail so eagerly and looked into his mistress's eyes so anxiously that it was plain that he had not dropped Adeline into the rain barrel as he had dropped Belinda long ago.

The only member of the family who did not help was Penobia, Susie's beautiful yellow coon cat. She was named that funny name because she was brought up on the banks of the Penobscot River. All through the hunt and the overturning of things Penobia had slept on her big blue feather cushion. She woke up just enough to purr politely whenever any one brushed against her in the search.

At last everyone gave up in discouragement.

"It does seem as if Adeline had evaporated," said grandfather, sinking into his big chair. He was tired out.

Perhaps Susie had been brave as long as she possibly could, or maybe that big word alarmed her; anyway, she caught her breath and began to cry as if her heart were breaking.

She dropped on her knees beside Penobia and hid her face in the long, soft, thick fur. "O Penobia," she sobbed. "Can't you help?"

"Mmm," replied Penobia encouragingly. And she opened her beautiful eyes wide and stretched herself away out and turned over and—there was Adeline!



The Gnome Who Was Turned Into a Bird

BY ANNE JOHNSON ROBINSON

Once there was a fairy school
Taught by a gnome.
No one ever really knew
Where was his home.

Oh, the dreadful things he did!
Whipped the fairy boys,
Whipped them hard and very long,
If they made a noise.

Till the Queen who saw his deeds
Heard the fairy-call,
Turned the gnome into a bird,
Whiskers and all!

Now on quiet summer nights
Far across the hill,

Just from habit still he calls,
"Whip poor Will!"



Teeth That Glisten

Every boy should have them

IN the old days, teeth were more dingy than now. Millions of people have now found the way to whiter, cleaner teeth. You see them everywhere.

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Germs breed by millions in film. And they cause many troubles.

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AT THE WORKBENCH

By Aldis Dunbar



I cannot make a wonder,
A jewel or a star;
My eager hands have slender skill;
My dreams as fireflies are.

Yet, if I toil unceasing
At small and sparkling things,—
A lantern lighting homeward feet,
A silver bell that swings,

A prism catching sunshine
(Stilling a restless child),
A trumpet that from far-off hills
Brings echo, clear and wild,—

Some day some Wonder Master
With Beauty to express
May blend my gleaming trifles in
A whole of Loveliness.

LIKE THE FLOWERS IN
GRANDMOTHER'S GARDEN

MOTHER set that out upward of fifty years ago," an elderly man said the other day, pointing to a flowering almond bush covered with a profusion of small buttonlike pinkish blossoms. "I can just remember it. Aunt Ruth Sherwin brought her the root wrapped up in an old blue-checked gingham apron. There's never been much done to the bush. It just stands there where it was put and flowers every year when the right time comes."

Some months since a kindly disposed visitor brought to the sick room of an aged invalid an illuminated copy of the Twenty-third Psalm to hang on the wall over her bed. The old lady smiled as she acknowledged the gift. "Yes, I shall like to look at it," she said in her low, gentle, patient voice. "It will be like having an old friend come in, all dressed up. That psalm was one of the first things mother taught me. I've heard her say often that I knew it word for word before I was five years old. Of course it didn't mean much to me then,—I was too young to understand,—but I can't begin to tell you what a comfort it's been to have it handy when I felt lonely or downhearted or was lying abed in the dark."

And then slowly, reverently she repeated the psalm.

"My father always had a prejudice against playing with chance," a man of sixty years replied when some friends importuned him to take a "fling" in the stock market. "He said it was playing with a phantom, and that what you gained somebody else must lose. If you gained without giving an equivalent, it distorted your ideas of values and made you discontented with the ordinary routine of working and earning. If you lost, it was a long, hard task to replace what had melted away in a moment."

Many of our choicer flowering plants are annuals, and the seed must be sown every season, but some of the familiar flowers in old gardens are perennials and were first planted long ago. Perhaps this age of novel ideas and untried theories is an apt time to inquire whether what is really of most worth and rarest loveliness in the garden of the heart does not spring from the root of an old-time planting. The elements of stable character are as old as the race. Sound principles of conduct are of perennial growth. Trust in God, friendship, home, the haunting sweetness of old songs, the fireside companionship of good books—these are like the flowers in grandmother's garden, common, everyday flowers that fill life with fragrance and beauty.

THREE OF A KIND, ALL HOMELY

EMILY DICKINSON, that shy, secluded little lady of Amherst who was so wonderful a poet and letter writer, kept hanging on the walls of her own room the portraits of three of her literary favorites: Carlyle, George Eliot and Mrs. Browning. Though all three had faces full of character and interest, none was physically beautiful. The owner of the pictures, though she loved them, was blessed with a swift and joyous sense of humor, so that she thought "How amused she would have been!" rather than any feeling of shock or distress was natural when at the time of her death they caught the eye of an old family retainer who was assisting with the necessary arrangements. The good helper surveyed the trio intently,

hesitated and then asked diffidently if they were "relatives on the Norcross side" and added hastily, "I know they can't be Dickinsons, for I have seen all of them, and they are all good-looking."

She was after all less severe on their personal appearance than some more noted critics have been. Carlyle has been described as looking like "a grumpy Scotch peasant whose parritch had disagreed with him." George Eliot has been said to have had "a long face like a horse"; and a famous and picturesque, though certainly unkind, reference to the familiar portrait of Mrs. Browning showing her small, delicate features heavily shadowed by masses of dark curls characterized it as "a death's head looking out of a furze bush."

Let no admirer of these great ones be troubled. A face that unilluminated is plain or positively ugly becomes, when animated, eager or smiling, filled with a transfiguring charm that equals or surpasses beauty of feature. It was so with those two great women and with the sturdy Scotchman from Ecclefechan.

Nor is it always the homely great upon whom unlitary persons, unimpressed by a renown of which they are ignorant, bestow unexpected criticism. Lord Byron was a handsome man and knew it. The low, rolling Byronic collar that he favored admirably displayed a columnar throat. A new maid, dusting a small bronze bust of the poet that adorned the desk of an American writer in England, ventured a comment.

"'E's a 'ansome 'ead," she said reflectively, "but you'll excuse me saying, ma'am, since 'e's no relation, it's a pity the poor gentleman 'adn't more style. 'E really do need a nobby tie."

MELANCHOLY, BUT THE KING
APPROVES

THOUGH little is said or done when the British sovereign opens Parliament in person, the custom is well worth retaining if only for the magnificent spectacle that it offers. But when it comes to the *simulacra*,—that is, the opening of Parliament by royal commission,—the grand pageant is replaced by a pitiable mockery, and as for the proroguing by royal commission, that is—so we learn from Sir Henry Lucy in *Lords and Commons*—an even more melancholy spectacle.

The five commissioners, he writes, are received with elaborate ceremony that takes up a deal of time that might well be spared at the end of a busy session, but it is nothing to what follows. There is a mighty pile of bills that, having passed both houses of Parliament, now await the royal assent. The clerk on the right-hand side of the table, taking up the bills one by one, first bows low to the cloaked figures of the commissioners, ducking as if a sustaining bolt had been suddenly withdrawn from the region of the small of his back. He reads out the title of the bill. Thereupon commences the task of the clerk on the left. If it be a money bill, the clerk, first bowing low to the commissioners, turns his head slightly to the left and over his shoulder throws at the Speaker and the assembled Commons the phrase: "*Le roi remercie ses bons sujets, accepte leur benevolence, et ainsi le veult.*" (The king thanks his good subjects, accepts their bounty and approves it.) If it be an ordinary measure, he says with the same melancholy gesture: "*Le roi le veult.*" (The king approves.)

Whether there are ten bills or two hundred, the process is the same. First, the clerk on the right-hand side bows to the commissioners; second, he recites the name of the bill; third, he bows again; fourth, the clerk on the left-hand side bows to the commissioners; fifth, with scornful gesture of disregard he throws over his shoulder to the awed Commons the assurance of the royal assent; sixth, he heaves a little sigh of sympathy with the commissioners for having to meet the Commons; seventh, he bows again, and his colleague takes up the next bill, and the whole process is gone over again, the phrase "*Le roi le veult*" rising and falling over the deserted House like the cry of the curlew on a distant desolate rock.

A SHARK INSHORE

THE theory that a person standing or floating in the water is in far greater danger of being attacked by sharks than when swimming is advanced by Mr. F. A. Mitchell-Hedges in his book *Battles With Giant Fish*. He also gives instances of big sharks coming right in on a beach if attracted by a motionless object. He writes of one thrilling experience in Panama Bay:

It was a tremendously hot day even for the tropics, and, although we fished for some time here, our efforts were rewarded only with one sand shark weighing about two hundred and forty pounds. Ever since our arrival the tide had been ebbing rapidly and was now almost low. Knowing that Lady Brown was keen on collecting shells, Mr. Typaldos went ashore with her in the dinghy, leaving De Ossa and me on the yacht to continue our fishing; but we had no luck. I must admit that the heat was not conducive to energy, and so we both placidly lolled under the white awning, and the lines remained motionless in the water. We could see Lady Brown and Typaldos prowling about, every now and again stooping to pick up something.

Lady Brown was standing quite still in about nine inches of water, bending down with her back to the sea, evidently examining something on the bottom, when to our amazement and horror we saw a big black fin making straight towards her.

"Look!" I said to De Ossa. "It's going to attack her!"

Right up on the sand it swam, almost wriggling, while she remained totally oblivious of her danger. Simultaneously we roared with the utmost strength of our lungs: "Don't move! Look behind you! For Heaven's sake don't step back!"

The fear in our voices, traveling across the hundred yards of water, made her realize that she was in mortal danger, and with wonderful presence of mind she turned her head without moving her body an inch. The entire dorsal fin and back of the big fish were out of water; its waiting mouth could not have been more than three feet from where she was standing. Had she made one step backwards, the consequences would have been too awful to contemplate, and the horror of it would have remained with us all our lives. As it was, De Ossa and I were sweating in an agony of fear, and it is impossible to describe how our pent-up feelings were relieved when we saw her advance calmly to the dry beach.

Having reached *terra firma*, she turned round, but the brute took not the slightest notice, being utterly devoid of fear. Typaldos had run up on hearing our shouts, and now, picking up a huge piece of rock, he hurled it at the creature, which almost disdainfully retreated from the shore, with its dorsal fin remaining above the surface.

"De Ossa," I said, "I'm going to get that fish!"

"I'm with you," he replied.

Taking one of our largest hooks and lines, we baited with a huge lump of the sand shark and, rowing in, ran the line out about forty yards offshore from the spot where the shark had been waiting to attack Lady Brown. The dinghy had hardly returned from dropping the bait before away went the line. We had fastened one end of it round a huge rock, and all of us, seizing the rope, struck hard. We lurched forward under the shock and could not have held it had it not been fast to the rock.

We all felt vindictive. We gave no quarter, and as quick as we could we brought the fish to the beach. We had taken the rifle ashore with us. Crack! And again! One great thrash of its tail, a convulsive quivering, and that was the end of the fish tiger.

COFFEE FROM BURNED CORN

GOOD coffee, writes a correspondent, can be made from pop corn. Grandmother showed me how to do it years ago. I tried to pop some corn one day when she was visiting at our house, but the corn was too new to be thoroughly dry, and of course I could not make it pop. Instead of a popper full of feathery whiteness all I got was a heavy black mass of scorched and blackened kernels. I suppose it was to keep back my tears of disappointment that grandmother insisted that the corn was not spoiled but just right to make good war coffee.

Coffee from burned corn! It did not sound reasonable, but I had seen grandmother take some fat that she had saved from the pigs at butchering time, some flour and some hard green apples and turn them into the finest of apple pies. If she could turn fat, flour and green apples into pies, perhaps after all she could do something with burned corn.

She took charge of things, but let me have the fun of doing all I could. First we cracked the corn by running it through the old coffee mill; there was a cupful of it. We put it into a stew pan and added five or six cups of water and set it on the fire to boil. In about ten minutes the coffee was done, and then grandmother strained it into our cups.

With plenty of cream and sugar it was the best coffee I ever tasted. I was allowed to drink all I wanted, for grandmother said that that kind of coffee would not make anyone nervous or wakeful at night.

After that, coffee making was always a part of the fun of popping corn. Grandmother had taught us that the "old maids," as we called the unpopped kernels, were very useful after all. In fact we were always disappointed if the corn popped so well that there were not enough "old maids" left to make coffee.

Grandmother made and used that kind of coffee during the hard years following the Civil War. Money was scarce, and things were expensive. A load of hay brought scarcely enough to buy a pair of leather boots such as all farmers wore in those days. The strictest economy was necessary. Folks bought nothing that they could make at home. They got up mornings at the first sign of light and worked until dark. Homegrown wool was spun and knit into socks, stockings, mittens and other articles of clothing. All the fat not fit for food was carefully saved and made into soap. The tallow was used for making dipped candles. Folks made all their sugar from their own maple trees. Instead of matches people used lighters, strips of paper conveniently folded. They never used a match when there was a fire in the stove or in the fireplace.

The housewives found that grain properly scorched made a good substitute for coffee. After many trials grandmother decided on rye as the best. Sometimes she improved the flavor

and the color by adding carrots or chicory root. Those vegetables were prepared by cutting them into small cubes and then drying and scorching them before mixing them with the scorched grain.

Folks always kept some real coffee and white sugar on hand to use in case company came, but at other times they used only homemade coffee sweetened with maple sugar or sometimes with honey from their own bees.

A SOCIAL CRISIS

THE archdeacon was small and preisee-looking. He had, says Mr. A. C. Benson in *Trefoil*, a most courteous and deferential manner and accompanied his remarks, which were few, cautious and precisely phrased, with a constant succession of little bows, like a pigeon patrolling a lawn. He seemed determined never to commit himself to any too definite a statement.

I remember my father's saying that when a child was born to the archdeacon he met him in the vestry, offered his congratulations and asked whether the infant were a girl or a boy.

"I think," replied the archdeacon, "that I may go so far as to say that it is not a girl."

One hot summer day the archdeacon came in from Riseholme to Lincoln on business. His dress, let me say, was like himself, infinitely precise—a long-tailed coat, a double-breasted waistcoat, trousers all of glossy broadcloth and a high-crowned shovel hat. On that particular day he walked in and, finding himself embarrassed by the heat, took off his coat and carried it over his arm. The first mile was mostly through woods; the next was through open fields; then the suburbs of Lincoln began. But the archdeacon either forgot to resume his coat or made up his mind not to replace it and advanced along the road first through the scattered houses, then through more crowded streets and finally into the close, in his white linen shirt sleeves, with a little bow for every step.

The news—at first an incredible rumor, at last a well-attested fact—thrilled the close to its very depths. I can remember perfectly a tea-table conversation at the chancery, with two or three callers present, where the subject formed the only topic of conversation. Opinion was sharply divided; some held that the archdeacon's conduct was pure absent-mindedness, some that it was common sense, some that it was desperate disregard for public opinion.

My father championed the common-sense view; one hardy spirit suggested that the archdeacon should be asked to explain, but that was too obviously a question of belling the cat; and the matter was at length ended by a stately widow who lived in the close. "Well," she said, "my feeling is that the less said the better; and we must try to go on as if nothing had happened."

THE DESCENT OF MAN



Wife: "Oh, darling—did you miss a step?"
Husband: "No, my dear—hit every single one of them!"

—Wilson Fenning in *London Opinion*.

MR. PEASLEE ON SKIS

CALEB PEASLEE walked with a slight limp; moreover, he carried a cane, and when he stepped he leaned upon it openly and groaned when he moved suddenly. Deacon Hyne viewed him with friendly concern tempered with not unfriendly malice. "You ain't been imp'dent to Mis' Peaslee, so s't she's had to come to violence with you, have you, Kellup?" he asked with mock gravity.

Caleb wrinkled his face into a painful smile and shook his head.

"Well, what have you been up to?" persisted the deacon.

Caleb made no immediate reply, and when the words came at last they seemed far from relevant. "Things ain't much the same now as they was when I was younger," he observed.

"What things ain't?" asked the deacon.

"Most anything," replied Caleb shortly. "Snowshoes ain't, for one thing I can speak of. When I was younger there wa'n't many that could keep up with me on snowshoes. Nowdays, though, they've got things diff'rent; old-fashioned things like snowshoes ain't good 'nough. They've got to have these here rigs they call skis, thin boards of cedar eight or ten foot long and slippery as an otter on the bottom side of 'em. And tricky! They'll slide out from under you as easy as a canoe if you take a careless breath whilst you've got 'em on!"

"How do you know they will?" inquired the deacon slyly.

Caleb reddened. "Oh, I was cal'latin' to tell

you when I got round to it," he asserted. "I been tryin' a pair—you might know I'd been doin' somethin' as foolish as that by the way I'm bunged up."

"There's a young feller stayin' up to our house this week—one of that gang that was here last summer. When he went away he told me he was comin' back for the winter sports. I told him then my winter sports was tryin' to get up about fifteen cord of sled-length wood and keepin' the pump thawed out so'st I could water the critters twice a day, but it didn't seem to interest him much."

"Two-three days ago he showed up with a stack of mackinaws and blanket coats that when they was in a pile made a bunch as big as a good-sized cock of hay. And another thing, he had a pair of them skis with him, and comin' home from the depot he told me what r'markable things they was—how far a man could travel on 'em in a day and what an improvement they was over snowshoes. I kind of poohed the idea, but I didn't say much; it was too cold to argue and drive too."

"The next day, though, I took occasion to tell him where he was wrong in thinkin' they was the equal of snowshoes in any way; he took issue with me, and we had quite an argument—he tellin' me what he could do on 'em, and me listenin' but not b'lievin' much more'n half he told me. I did allow, though, that they was all right for children, like 'nough, and that sort of got him teched, and the last thing he said b'fore bed was that some folks wouldn't learn by bein' told and was too old and clumsy to learn by tryin'."

"I s'pose it was that remark that got me up extra early the next mornin', though I wouldn't have owned up to it. But I did get up, and when I'd had breakfast and got the chores done I came back into the shed where he'd left them things standin' behind the door the night b'fore. I ain't goin' to say what minute I made up my mind, but fust thing I knew I had 'em under my arm and was sneakin' out past the shed, quiet, so'st he nor my wife wouldn't hear me. I didn't really give it much thought, I s'pose, but I must have had a feelin' that it would be well to git away by myself for the fust trial. Anyway I made for the back part of the orchard where there's a slope away from the house—more'n a slope, you might say, for it's quite a little hill clear down to the stone wall."

"I sot down on a stump right at the top cant of the hill and put the things on, and then I stood up and give myself a shove out from the stump with my hand; and the next second I'd give a good deal if I could have took that shove back and come to a halt again. I told you they was slippy on the bottom, but that don't give you any idea how slippy they was. They was lively as quicksilver! That little shove I give myself started me off ten mile an hour, and when I fairly struck the slope I begun to gather speed to scare me. I could feel the wind whistle through my hair when my hat went sailin' off, and I missed half them apple trees by less'n an inch, seems to me!"

"Well, Hyne," Caleb said soberly, "b'fore I got halfway down that hill I was c'nverted. I knew they wa'n't any tools for children to play with nor for men of my age either. I was jest hopin' I'd escape mishap long enough to git 'em off'n my feet again when I come swoopin' down to that stone wall at the bottom—and the next second I'd lepped it ten foot in the air and was headed straight for that maple tree in the swale; and I couldn't turn an inch! I struck it with my right arm and shoulder fust and with my knee and left foot next, though how I managed to turn round like that I'll never be able to tell. But I'd come to a stop anyway."

"Beyond wrenchin' myself pretty near apart I was all right and able to walk; and I did walk, let me tell you! 'Fore I ever made a move to git up I hauled them things off'n my feet, and when I went back to the house I lugged 'em under my arm—and that's the only way they're fit to be carried."

"I don't s'pose," said the deacon, grinning, "that you've told the young feller a word about it, have you?"

"I had to," admitted Caleb ruefully. "When I hit that tree I must have struck one of the skis kind of hard; anyway I slivered it half the length of it. But instead of bein' mad he's thorned me and laughed at me so much it drove me down here—and me not fit to travel a rod!"

AN AFRICAN WRESTLING MATCH

FOR grace and beauty as well as for spirit and fairness an African wrestling match compares well with many matches held in more civilized countries. In a recent book, African Clearings, Miss Jean Kenyon MacKenzie gives the following vivid picture of a wrestling match during a field day for the three African tribes of Mvok Amuku, Otolo and Esse:

The empty ring of ground bakes in the morning sun. Will the Otolo come? Suddenly from the wing at the left of stage where the trail enters the clearing there comes a light-foot troop; with incredible swiftness they come to centre; they dance beautiful, obvious dances of pride and derision and then retire to the shade of a tree. Now another light-foot troop runs out from the right wing; the clan Esse comes to centre; they display their quality and retire to a chosen base. For each group there is a man with an iron bell, a man with a wand, wise men to sit in the shade shouting counsel and drummers to fill the clearing with a multiple clamor.

Ango, the headman, steps out. He lifts a hand; the drummers pause, and the host declares in the grand manner. There is to be no foul play and no anger. Palm leaves like plumes are distributed for tallies. The drummers rage, and from the group in the shade individual wrestlers run out with conventional challenging gestures. It is the part of the challenger to plead like a lover; he droops altogether to his opponent, but the two or three young men who run in his company "ruffle up the crest of youth," then spurn the ground in an equal rhythm. The wrestler does not speak, nor do his seconds; but the man with the iron bell gives tongue.

A young man glides to centre; he falls upon a knee with his arms crooked like a drawing of youth on an Egyptian wall; he rises too swiftly, that beautiful image of supplication is too soon dissolved—he has come to grips with his opponent. And there is now another and another team at play in the hot dust of the ring.

There is a constant effort to keep the matches even. The headman's son returns again and again to a heavyweight, who rejects him, and who draws him at last under his armpit with an adult impatience, as a sort of scornful measure. But the headman, when he sees it, commends the challenge; and when the lad is thrown his father calls to him:

"Don't make a sullen face. Make another kind of face!"

For the manner is the thing almost as much, you would say, as the sport. Both shoulders must touch the ground to score, and umpires separate those who struggle too long in an equal effort. There is a pause after an unsuccessful throw—an interlude of conventional gesture, a play of exhaustion and touching posture, which is suddenly cast aside for the return attack. Men are acclaimed when they score; the women of the clan spring to their feet with a rustling of leaf aprons and bustles; the man who keeps the tally puts a leaf upon the ground, with a little dance. And for all the fair words of Ango there are quarrels.

WHEN THE RAT WAS POPULAR

NO other animal is so badly off for human friends as the rat, and yet there are apparently places in which he is, or has been, tolerated and even valued. Rats, says Mr. John L. Considine in Adventure, were never molested in the mines of Virginia City and Gold Hill, Nevada. The lower levels of those deeps were alive with the long-tailed rodents.

Their immunity from harm made them tame and even saucy. They fared sumptuously on the fragments left from the miners' lunches,—for the miners lived well,—and even in that respect the creatures were of service; they acted as scavengers in removing the scraps of meat and of other food that otherwise would have caused bad odors.

Because of the great heat—the temperature often rose to one hundred and forty degrees in the lower levels—the decay of the smallest scrap would have been unpleasant. But perhaps the most important reason for tolerating the rats was that when a great cave-in of rock was about to occur they gave the miners the first warning. The animals became uneasy and scampered about at unwonted times and in unusual places. The rats always were the first to discover that the earth was settling. The miners reasoned that the waste rock and timbers, in settling, pinched them in their usual haunts and so forced them to go forth in quest of new quarters in order to avoid being crushed.

AN AFFAIR OF FISH

AS the following anecdote from the Life of the Rt. Hon. Sir Henry Campbell-Bannerman, by Mr. J. A. Spender, sufficiently proves, great kings and statesmen do not continually talk political shop. In an English newspaper there appeared a picture that bore the title, Is It Peace or War? In it Campbell-Bannerman, who was then premier of Great Britain, was talking with King Edward. Round them the visitors were standing at a respectful distance.

A friend of the premier said to him later, "The artist has hit you off very well."

Campbell-Bannerman looked at the picture quizzically. "Would you like to know what the king was saying to me?" he inquired.

The friend said he should. "He wanted to have my opinion whether halibut was better baked or boiled," replied the premier.

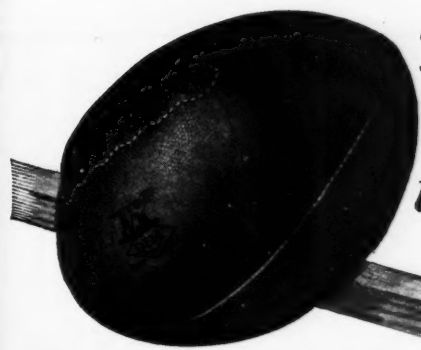
A MIGHTY APPETITE

IN robust ages and in a more primitive society there used to be much popular interest in the sort of competition in which the prize went to the man who could dispose of the largest amount of food in a given time. A contest of that sort, says the Argonaut, was organized in a mining town in the north of England. One competitor, a giant collier six feet in height and broad in proportion, succeeded in disposing of a leg of mutton, a plentiful supply of vegetables and a plum pudding washed down with copious draughts of ale.

He was unanimously declared the winner and was being triumphantly escorted home when he turned to his admirers and said:

"Eh, lads, say, don't say nowt o' this to my old woman, or she won't gie me no dinner!"

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A RECEIVER EMPLOYING TUNED RADIO-FREQUENCY AMPLIFICATION

THE response of a three-electrode vacuum tube when used as a detector is proportional to the square of the voltage applied between the grid and the filament. That is, if the signal voltage is doubled, the response will be four times as great. Thus the tube will give very loud signals on comparatively near-by stations but only weak signals on the distant stations. The purpose of the radio-frequency amplifier is to build up, or amplify, the signal voltage before it is applied to the detector, so that the response from the detector may be made greater on weak signals. It is not feasible to construct a radio-frequency amplifier that will amplify equally signals on all the wave lengths of the broadcast band. It is, however, comparatively simple to make an amplifier that will amplify signals of one wave length well and disregard, in part at least, signals on other wave lengths. By making the amplifier adjustable, or "tuning" it, we can cause the wave length at which the amplifier works best to coincide with the wave length of the station that we desire to hear.

There are several ways in which such an amplifier can be constructed, but only the simplest one will be described here. This method can be applied with but a slight change in the connections to any regenerative receiver employing a variometer (in the plate circuit of the detector) for regeneration. It can be successfully operated with almost any form of tuning apparatus, as will be shown.

To construct the receiver requires the following material:

- 1 variable condenser, .0005 m. f. maximum capacity (23 plate), with control knob and dial.
- 1 coil form, 4 inches in diameter, 2½ inches long.
- ½ pound of number 22 double-cotton-covered copper wire.
- 1 switch arm and five switch points.
- 2 vacuum-tube sockets.
- 2 rheostats.
- 1 variometer with control knob and dial.

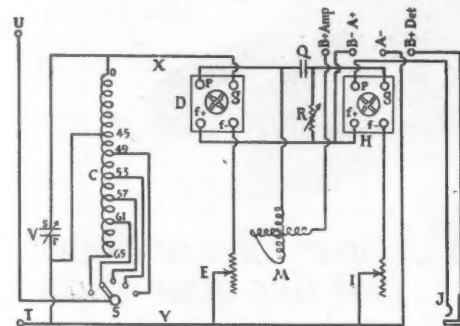


Diagram illustrating connections

- 1 grid condenser, .00025 m. f., mica, fixed.
- 1 grid leak, preferably variable from .2 to 3 megohms. If fixed, about .5 to 1 megohms is suitable.

(A combination grid leak and grid condenser cannot be used.)

- 1 single-circuit jack. (It may be omitted, if desired.)
- 6 binding posts (8, if no jack is used).

Panel, base board, connecting wire, screws, tubes, batteries, telephones, antenna and ground installation, etc.

At the left-hand end of the panel (K), as shown in the upper figure, is mounted the variable condenser (V), with the coil (C) and switch (S) next to it. Then come the radio-frequency-amplifier tube socket (D) and rheostat (E). Next is the variometer (M) and grid condenser (Q), followed by the variable grid leak (R), the detector-tube socket (H) and rheostat (I), with the telephone jack (J) or binding posts at the right-hand end of the panel. Binding posts are mounted at the left-hand end of the panel for the antenna (U) and ground (T) connections. The binding posts (B + Amp, B - A +, A -, B + Det) for the connections of the batteries are mounted at the rear of the base board (N), since that keeps the connecting wires out of the way.

The diagram of connections shows the symbols arranged so far as possible in positions that correspond with those of the actual

apparatus, as seen from the front of the panel.

The tuning coil (C) is easily constructed as follows: On the coil form begin to wind one quarter of an inch from one end (O) of the tube.

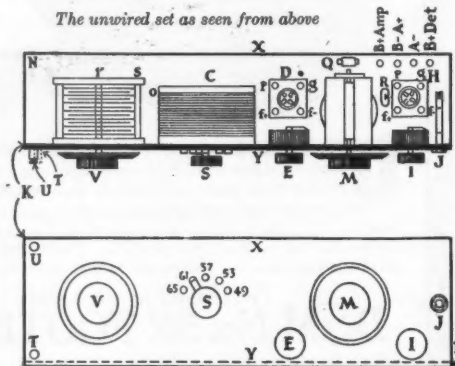


Diagram showing the panel layout

Wind on forty-five turns and bring out a tap. Then wind on twenty turns more in sections of four turns each and bring out a tap at the end of each section. The completed coil will then have taps at the beginning, the forty-fifth, forty-ninth, fifty-third, fifty-seventh, sixty-first and sixty-fifth turns. They are so numbered on the diagram. A connection is made from the first, or zero, tap of the coil to the stationary plates (s) of the variable condenser (V) and to the grid terminal (g) of the amplifier socket (D). The forty-fifth turn tap is connected with the rotary plates (r) of the variable condenser (V), with the ground binding post (T) and with one terminal of each of the filament rheostats (E, I) and with the battery binding post marked "A -". The remaining taps are connected with the five switch points, as indicated on the diagram. The remaining terminals of the rheostats are connected with the posts of the sockets marked "f -". The positive filament (f +) terminals of the sockets are connected with each other and with the binding post marked "B - A +". From the plate terminal (p) of the amplifier socket (D) a lead is taken to one terminal of the variometer (M) and to one terminal of the grid condenser (Q). The remaining terminal of the variometer is connected with the binding post marked "B + Amp." The remaining terminal of the grid condenser (Q) is connected with the grid terminal (g) of the detector socket (H). The grid leak (R) is connected between the grid post (g) and the positive filament (f +) post of the detector socket. From the plate terminal (p) of the detector socket a wire is carried to one terminal of the telephone jack (J) (or one telephone binding post, if no jack is used). From the remaining terminal of the jack (or from the second telephone binding post) a connection is made with the binding post marked B + Det. The arm of the switch (S) is connected to the antenna binding post (U).

The choice of tubes, rheostats and batteries is not limited to a particular type. It is advisable, however, to employ a UV-201-A or a C-301-A for the amplifier tube. If a storage battery is used for supplying the filaments, then a UV-200 or a C-300 tube can be advantageously employed as a detector. Very good results can be obtained with a UV-201-A or a C-301-A tube in that capacity. The set will also give fairly satisfactory results with the dry-cell tubes UV-199, WD-11, WD-12. The rheostat resistance will depend upon the type of tube chosen.

In operating the receiver you change the switch only when there is considerable trouble from interference. Normally you leave it in the position farthest to the left (as seen from the front of the panel); when there is interference you move the switch toward the right, so as to include fewer turns of the coil in the antenna-to-ground circuit. The strength of the signals is slightly reduced, but the selectivity is considerably improved.

In tuning you should advance the condenser and variometer dials together, with due care not to advance the variometer too rapidly. A little experience in handling the dials will show how to set the variometer for each setting of the condenser. If the variometer is advanced too far for a given setting of the condenser, the

radio-frequency amplifier tube will begin to oscillate. Usually when that happens the signals will cease, so that no one will operate the receiver in that condition—an advantage, since it renders the receiver virtually of the non-radiating type and so causes but little trouble to near-by listeners. For a given setting of the condenser the variometer should be advanced slowly and the signal allowed to increase in intensity until the tube begins to oscillate. The variometer should then be set below the oscillating point. A final careful adjustment of the condenser will bring the station in clearly.

A receiver of the type that employs a variometer in the plate circuit of the detector tube can be converted to a receiver of this type very simply. Remove the grid leak and the grid condenser and substitute a piece of wire for the grid condenser. Bring the connection from the tuning apparatus to the filament circuit to the negative side of the filament, instead of the positive. Then add the second tube and the grid leak and the grid condenser, as shown in this article. The tuning apparatus thus remains undisturbed.

A variometer, variometer and fixed condenser, combinations of variocouplers and condensers or various other types of tuning equipment can be used in place of the tapped coil and variable condenser described in detail above. If this is done, everything to the left of points X and Y in the diagrams is eliminated, and the terminals of the substitute tuning equipment that are intended to go to the tube are connected at those points.

A different method is used for converting the receiver described in The Companion for June 5, 1924, into one of this type. Mount the variometer, second tube, with its rheostat, the grid condenser and the grid leak on a second small panel, to be placed to the right of the panel described in the article mentioned. Remove the rotor of the variocoupler from the original set. Take out the grid condenser and grid leak and place a wire across the resulting gap. Connect the movable plates of the variocoupler to the negative filament terminal (f -) of the original socket, which now becomes the socket for the amplifier tube. Then wire the combination set so that the variometer takes the place of the rotor of the variocoupler and all other connections correspond with those shown to the right of points X and Y in the diagrams herewith.



The shoulder block



The leg-and-body block

HOW TO BLOCK IN FOOTBALL

MOST boys when they begin to play football think that blocking is merely bumping shoulders with a man they are expected to stop. Almost invariably the opponent slips round, and the blocker understands why only after the coach has explained, possibly with more force than patience. First, the would-be blocker has hit his opponent too high, about the height of his shoulders instead of just above his knees. Second, he did not make his body cover a large enough blocking area and so make a bigger obstacle for the opponent to go round. Third, he stopped with merely bumping the opponent once instead of keeping after him until the play was past.

Five methods of blocking are in common use, the shoulder block, the leg-and-body block, the body block, the Indian roll and the block from behind. Besides these methods there are many modifications. Each block has its definite purpose and is best suited to a particular situation.

The shoulder block is used almost entirely by linemen. It is made in much the same way as a front, or head-on, tackle except that the hands may not be used. You should hit your opponent at or above the knees with your shoulder. Keep your back straight, your feet apart and your eyes where you can see, and do not get overbalanced. Keep driving with your legs, taking short strides, which give you more power. Your arms should be close to your sides to avoid your being penalized for illegal obstruction of opponents. Fig. 1 illustrates this block.

The leg-and-body block is used by linemen and by ends against defensive tackles. It is most effective when your opponent is playing high. Get one knee between his legs and pinch his leg between your leg and your side. See Fig. 2. Rest the inside hand on the ground and keep crawling forward. This will prevent his getting out of your block, but remember that

using your arm to prevent an opponent from getting his leg out of the vise in which you have it constitutes holding and is subject to penalty.

An extension of the leg-and-body block is shown in Fig. 3. The first part is the same as that shown in Fig. 2. After jumping into the position shown in Fig. 2 twist your body so as to get your back against your opponent, then straighten up quickly and throw your weight against his body. This is especially effective for a small end against a tackle who is playing high. By this block an end can often throw the tackle entirely out of the way.

The body block is valuable for linemen in preventing opponents from getting through to block kicks or passes. It is also used against a backfield man, especially if he is standing still. Fling your body sideways at your opponent by dropping on your hands and knees in front of him and striking him at the knees with your side. Put the knee nearest him well out from the body to pin him in on that side and likewise put out the arm nearest him to keep him from sliding round you on that side. Continue



The leg-and-body block with an upward twist



The simple body block

to crowd him so that he cannot back up and get round you. See Fig. 4.

A common block is that which many coaches term the "Indian roll." It is used largely in the open by backs who are running interference or by linemen going through for the secondary defense. When properly executed it is most effective, but it shades rapidly into an illegal play if the blocker strikes his opponent anywhere above the knee with his foot or any part of his leg. To execute the Indian roll, dive across the path of the runner so as to strike him just above the knees with your hip or side, preferably the hip. Be sure that your head and the arm nearest your opponent are well across his path in order that he may not slide round you. As you hit, roll on over and raise your free leg off the ground. That extends your blocking area. See Fig. 5. If, however, he is stationary, it is sometimes better to keep your feet and remain in the play. By so doing, you may be able to get another man.

The block from behind, commonly known as "spiking," is often used to check men of the secondary defense who are likely to stop the play. Ends sometimes use this block upon tackles who are going through to break up end runs. They purposely leave an opening for the tackle to go through, then swing round and fall on his legs as he goes past them. See Fig. 6. It is an ugly block because it is unexpected. The opponent is intent upon the play and often does not notice the blocker coming from behind until it is too late. Spiking is defined as unnecessary roughness and penalized as such if practiced upon a man obviously out of the play or after the referee has blown his whistle.

A few points to remember about blocking: (1) Don't disclose before the play starts how you are going to try to block your opponent. If he guesses it, he can side-step and get by you. (2) Don't use your hands to hang on. Holding is not blocking and carries a fifteen-yard penalty. (3) Keep crowding your opponent when you have him blocked. The moment you stop, he may get away. (4) It is better to get one man clear out of the play than try to get two and fail.



The useful Indian roll

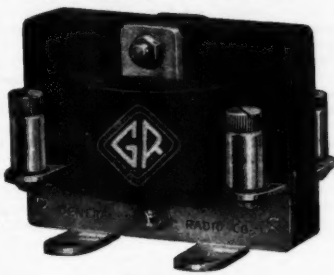


The block from behind

GETTING THE BEST RESULTS FROM A SET-FOCUS CAMERA

A SET-FOCUS camera is the simplest type of camera to use. It will produce good results when used in good light for snapshots of ordinary outdoor subjects, but to get the best results when the light is either very much weaker or stronger than usual, when the subject is very light or very dark in tone, or when an important object is nearer than fifteen feet from the camera, it is necessary to

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use certain simple adjustments found on the camera. One of them is the diaphragm, or lens stop. It serves a two-fold purpose: to regulate the quantity of light that reaches the film through the lens and to increase the sharpness of the image. In a box camera the diaphragm is a metal plate that contains three apertures of different size, each one of which passes just one half the quantity of light that the next larger one passes.

The shutter of a set-focus camera usually has only one speed for snapshot work. That makes an exposure of about one twenty-fifth of a second. Since light varies in its power to impress an image upon the film, and since a scene that is dark in tone needs more exposure than one that is lighter, it is obvious that one shutter speed cannot always give the correct exposure. The best that the camera maker can do is so to adjust that one speed that it will give an approximately correct exposure with the largest diaphragm opening when photographing an ordinary subject in a good light. Some latitude exists, but an exposure that deviates greatly from the normal will spoil the negative.

You are not likely to overexpose when making snapshots unless the sunshine is very bright and the subject is light in tone. Such a combination is most frequently encountered during the summer season when photographing beach scenes and marine subjects in general. Then you can prevent overexposure by employing either the medium-sized or the smallest diaphragm opening.

If the subject requires a longer exposure than you can give it with the shutter set at "instantaneous," set the shutter for a time exposure by moving the small indicator until it points to a spot marked "T" or "Time." Then, instead of the shutter's opening and closing automatically when you press the release lever, one pressure of the lever opens the shutter, and it stays open until you press the release a second time.

The best way to find out whether you should make a snapshot or a time exposure is to consult a set of exposure tables or a small instrument called an exposure meter, such as any dealer in photographic goods can supply. If the exposure guide indicates that an exposure of about one twenty-fifth of a second is sufficient with a diaphragm or stop of F11 or smaller, F11 is about the number of the largest one found upon a set-focus camera,—you can make a snapshot exposure without danger of spoiling the negative from underexposure. On the other hand, if a much longer exposure is indicated, place your camera on a tripod or on some other steady support and set the shutter for a time exposure. Half a second is about as short an exposure as you can make when the shutter is set for "Time." If you wish to give an exposure of several seconds, a simple way to count the seconds is to repeat the figures, as "one-one," "two-two," and so on. It is usually best to use a small diaphragm when making a time exposure unless you wish to make a very long exposure.

Although the following figures are only approximate, they give a fair idea of the comparative length of exposure required by different classes of subjects under different conditions when the shutter is set for "Time" and the smallest diaphragm opening is used: Ordinary landscapes with foliage on dull, cloudy days between 9 A.M. and 3 P.M., one half to one second; similar subjects on a clear day, but early in the morning or late in the afternoon when the sun is less than one hour high, one half to one second; woodland subjects where the camera is surrounded by thick foliage, two to ten seconds, according to the time of day and the weather; outdoor portraits with the subject in the shade of a building or on a covered porch, one to two seconds; portraits made in a well-lighted room, five to ten seconds. Using the medium-sized diaphragm opening will cut the length of exposure in half.

You may have tried more than once to photograph a pet or a person and been disappointed to find that the image of the principal object was blurred, though the background was sharp. The trouble was that the principal object was nearer to the camera than the minimum distance at which the lens will cut sharp. On a focusing camera the lens can be moved in or out until a sharp image is obtained of objects at any given distance. With a set-focus camera you cannot do that, but you can get much sharper images of near-by objects by using a smaller diaphragm opening. If the camera is not larger than 2½ x 3½, using the medium-sized diaphragm opening will bring objects as near as seven and a half feet to a good focus, and the smallest opening will produce a sharp image of objects as near as five feet from the camera. If you use a larger camera, you cannot approach quite so close, but using a small diaphragm opening will improve the definition. Objects three and a half feet from the front of the camera can be rendered sharp in a picture by using a supplementary lens called a "portrait attachment." It is commonly used in making head-and-shoulder portraits, but it is equally useful to the owner of a set-focus camera who wishes to get a good-sized image of flowers or other small objects. But remember that when you use a portrait attachment objects much nearer or farther from the camera than three and a half feet will be out of focus and consequently blurred, and that consequently you should measure accurately from the subject to the camera and should use a small diaphragm opening.

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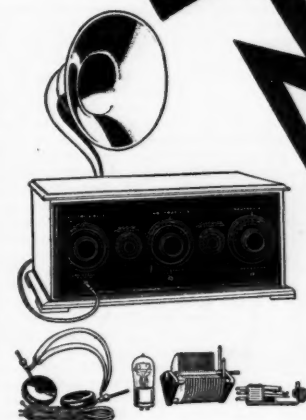
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RIDING IN THE SIDESADDLE

THERE has already appeared on the Girls' Page an article on Riding for Girls, in which directions were given for riding astride. But, as the sidesaddle is still widely used, an article on it is desirable.

Before a girl rides she should know and love horses. Intimacy with one of the most finely organized and intelligent of our domestic animals never in itself made any girl masculine or "horsey." On the contrary, it tends to foster sympathy, make her kind and gentle and teach her how much she can reasonably expect of the horse she uses. No two horses are alike in temperament or disposition. Until the rider has gained the confidence of the horse she cannot hope to manage him with sympathy, and so she loses not only much of the pleasure of riding but one of the greatest elements of safety.

Choose your horse carefully. For a rider who does not weigh more than one hundred and fifty or one hundred and sixty pounds an animal fourteen hands high—which is the dividing line between horses and ponies—or a little more, is ample in size and strength. Such horses are usually lower in price than those that are larger or smaller.

The saddle horse should be of a cheerful, active temperament but never high-strung or nervous. He should be gentle in disposition and above all things sure-footed: a saddle horse that habitually stumbles is both unpleasant and unsafe to ride.

The riding bridle commonly used has two separate bits, one a snaffle and the other a curb. The snaffle is used when a horse is walking or trotting, the curb when he is going at a canter; by the use of the two bits and the signals to which a well-trained horse is accustomed it is easy to make him take any gait. The snaffle alone is to be preferred to the two bits if the horse goes well and can be handled easily; but, if used alone, the snaffle should have a large ring at each end to prevent it from slipping through the mouth.

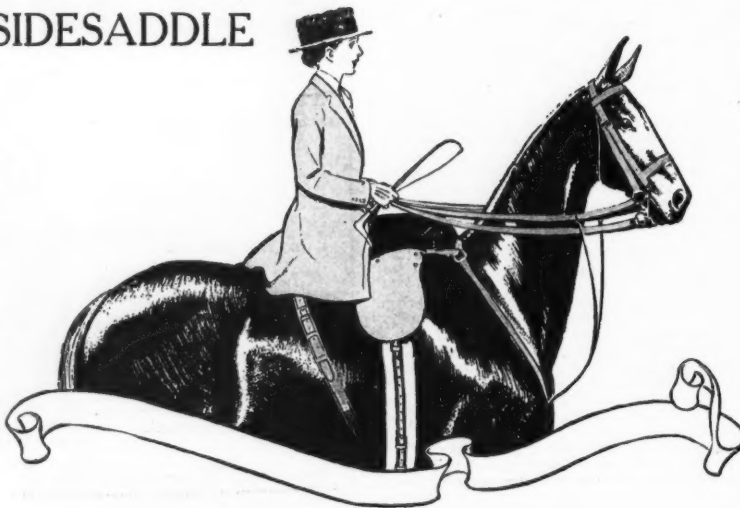
The sidesaddle should be of the approved English pattern, though it need not be imported. The seat should be of pigskin, and there should be two horns.

It is important that the saddle fit the rider. The stirrup strap should be just long enough to bring the left knee up under the lower, or "hunting," horn, so that the horn fits nicely over it. If the strap is too long, the horn falls of its purpose; if it is too short, the pressure of the horn upon the knee is uncomfortable. The right leg, which is carried over the upper horn, should fit in such a way as to allow the foot to hang comfortably, and not stick out awkwardly in front, and the whole adjustment should result in a seat upon the middle of the horse's back and not on either side of it. (Figs. 1 and 2.) The ball of the foot should be kept on the stirrup iron, with the toe parallel to the horse's side and the heel pressed slightly downward. The rider should be careful to balance sufficiently to the right, so that she is not dependent on the stirrup. The chief control and balance on a horse comes, not from the stirrup, but from the firm seat of the body in the saddle and a straight but relaxed carriage.

Before mounting examine the girths and, if they will bear it, tighten them. Failure to tighten girths is the cause of more mishaps in riding than any other thing.

In mounting, if there is a man at hand to assist you, take the reins and the whip in your right hand and place the hand on the upper pommel of the saddle; then put the left foot in the palm of the man's right hand and raise yourself until your left leg is straight. Spring into the saddle just as the groom raises his hand. He will place your foot in the stirrup and at your signal will give your mount his head.

There are many approved ways of mounting, which you will learn by practice. Use great care if the horse is at all inclined to be skittish. Mount with a steady, decisive movement; never with a jerky or timid one. A horse seems to sense the rider's state of mind and will be quick to respond nervously to unskillful handling.



If you must mount without help, bring the horse up to a step or a low piazza. Take the reins and the whip in the left hand, place that hand on the pommel, and put the left foot in the stirrup. Grasp the cantle of the saddle with the right hand and spring by pushing off with the right foot. In mounting, settle the foot in the stirrup last; in dismounting, clear it first.

The proper way to hold the reins is no less important than the seat. The beginner should use the snaffle reins only and knot up the other pair and allow them to hang on the horse's neck. Hold the reins firm and light in both hands, with the palms of the hands downward, the reins passed round the outside of the little fingers and the loops brought forward and held between the forefingers and the thumbs. After you have gained a little confidence the better way is to hold both in one hand. (Fig. 3.) Such a grip is in the best of form and prevents the reins from slipping. When using the curb and snaffle pick up the reins with the right hand and pass the fingers of the left between them. The curb reins will be between the snaffle reins, and all will come up over the first finger and be held in place by the thumb. Hold the knuckles nearly vertical with the palm of the hand down; the elbow will then of necessity stay close to the body, and you will avoid an ungraceful attitude.

In "posting," or rising to the trot, take care not to lift yourself by pulling on the reins. Rise with the rising movement of the horse's back, lifting yourself by a pressure on the stirrup and on the upper pommel. Hold the elevated position until the movement is downward again. The motion is not difficult and soon becomes automatic and rhythmic. You rise only a little and remain up just long enough to take the downward movement at the right time. In cantering do not rise in the saddle and resist the impulse to draw the left foot up. Keep a position in which the left foot is in line with the knee and the right heel is touching the left shin. In putting the horse into a canter it is necessary to pull his head to the left side, so as to make him lead with the right foot.

A light riding whip is generally, though not always, useful in handling a saddle horse. It should be used, not as an implement with which to punish him, but as a means of making him understand what is wanted of him. The crop may have a lash as the crops of expert horsewomen do, but it is not used. Now and then the rider uses the handle as she would use her heel to urge on her mount.

For those who can afford it a habit made by a good tailor is a luxury worth having; but the habit need not be costly either in material or in make. Fit is more important than material.

Fashion prescribes riding-boots similar to those worn by men, but high laced boots with stiff soles look well and are in every way satisfactory. Heavy riding gloves should of course be worn.

Leaping and cross-country riding afford exhilarating sport, but for most girls the risk is out of proportion to the pleasure.

In learning to ride always,

if possible, have some one with you who understands horses and is capable of taking care of you if you lose your presence of mind. Remember that by short rides often repeated you will improve faster than by long rides taken at greater intervals.

Remember too a few important "don'ts": Don't startle your horse needlessly with the whip.

Don't pull too hard on the curb bit.

Don't turn corners too sharply.

Don't in any circumstances, no matter how frightened you are, let go of the reins and cling to the saddle with both hands. That is the surest of all ways to get hurt.

Remember that the horse is a good servant to a good master. He will introduce his rider to a sport that is second to none in its exhilaration. The pounding of hoofs under you, the fresh sweep of wind against your face, will set you up as almost nothing else can do. It is small wonder, then, that horseback riding is holding its own in the affections of many girls, whether they take their rides over city bridle paths or country lanes.



Fig. 3

For the Tea Table

It is in the Girls' Page for October

PARTY PEOPLE

NOVEL favors are always welcome to the hostess who "wants something different," and nothing could be more amusing than the little men shown in the illustration.

The favors can be stuffed with pink or white sugared popcorn, with peanuts, with assorted nuts in the shell or with marshmallows. To make them you need thin isinglass paper, white mosquito netting, black crepe paper and sprigs of flowers or leaves, either natural or artificial.

Gather a heap of nuts about the size of a molasses popcorn ball and wrap the isinglass paper round it, and then wrap the netting round that. Wind a smaller square of netting round a smaller heap of nuts and twist the netting tight at the top. Invert the smaller ball and thrust the twisted end down through the opening at the top of the other ball. Tie the two together with white string and a strip of netting to form a collar.

You now have the head and body of the little man. Sew or paste to the head bits of crepe paper to represent the features and put a hat of crepe paper on the head.

Tuck a flower or a sprig of green across the front of the larger ball and fasten it in place. The favor is now ready to take its place at the dinner table!

THE BETTER WAY

ADELLA rose every morning at seven. She ate a hurried breakfast, made her bed hastily, flung on her coat and planted a kiss on her mother's face that slid along the cheek and landed just in front of the ear. Adella was off to school!

The session closed at three o'clock, but Adella was not at home until four. She liked

to loiter, for she had "best friends" to see and many of them. She used the next hour for tennis or skating, according to the season. Then came a few moments at the piano. Dinner was followed by a study period that lasted until bedtime. Obviously there was only one day in the week in which Adella could tidy up her room, and the "rush and bang" habit marked the flash of broom and duster in her room every Saturday.

First she swept. Then she dusted the class mottoes, the school and college pennants, the racket, the fish net, the trophies of vacations and college sports tacked to the wall.

On a shelf over the door she had eleven fancy boxes. Once upon a time every box had held candy. It was the thing for girls of Adella's age to save such boxes as an Indian saves the scalps of his victims. The eleven boxes represented eleven different boys who had sent her candy last St. Valentine's Day. No other girl had more. But the boxes had to be dusted.

There were silk and ribbon powder boxes, glove boxes and handkerchief boxes on the dresser. "Too pretty to be put away," said Adella, "I want them in sight." And they too had to be dusted.

On the writing desk were photographs with frames and photographs without frames, two pink candles in brass holders, a fancy calendar, a doll in pink silk that Adella had won at a fair and a miniature Goddess of Liberty in silver to be used as a paper weight when there were any papers to be weighted. All had to be lifted off while the surface of the desk was wiped; all had to be carefully dusted and put back again.

In the open writing desk were boxes of fancy writing paper, a pencil holder, an ink stand with a little vase holding a pen with a pink quill holder; a china box for stamps and another for pens, each of which had a fancy shepherdess on top of it. All had to be dusted, and the little shepherdesses had occasionally to have a soap-and-water bath. Adella looked at the pigeonholes and sighed. She knew that the dust was accumulating there, but, "Oh, well, let it wait another week!"

It was eleven o'clock one Saturday morning when she sank exhausted in her chair. Glancing through the open window, she saw a group of her friends going by to play tennis. She was hot and tired, and somehow all those little cluttering adornments of her room did not appear so attractive.

"The Chinese," said a voice from the doorway, "have a better way."

"Well," answered Adella in tired tones, "I wish I lived in China. Come in, Aunt Addie, and tell me about it. I want to hear something to take my mind off that group that just went by to play tennis."

Aunt Addie entered with a smile, but before she could be seated in the rocker it had to be cleared of one silk workbook that Adella kept on the window sill, one silk bag that after it had been shaken was to be hung over a door knob, one box of chocolates, a silk kimono that Adella always hung over the foot of her bed because of the "touch of color" it gave to the room and three books.

"When I first entered a Chinese house," said Aunt Addie, "I thought it dreadfully plain. The walls were bare, there were no silk drapes such as we have over here, everything was exquisitely clean, but bare. Then I caught sight of something on a small table two rooms beyond so beautiful that I fairly held my breath. It was a vase of wonderful color and workmanship, and almost the only bit of adornment in the house. I learned then a custom of the Chinese. They have many treasures like the vase, but they usually put them out only once at a time. When they tire of one they put it away and set another in its place. The simplicity of it enchanted me. It seemed much more beautiful than our over-adorned homes. I grew to love it."

"Now, if a girl from China had this room she would put those candy boxes away; she would take down those dust-catching college and vacation trophies, for, really, my dear, they are not artistic. She would sweep those into the dresser drawer; she would—"

"What exquisite workmanship in that silver frame that holds your mother's picture! Do you know, I didn't notice it when I stood in the doorway. There!" She swept everything else off the dresser and put the picture there alone. "How beautiful it looks now!"

"Well, dear, I must be going. Your mother and I are motoring over to Ivy Hill. Sorry you can't go with us, but by the time you have bathed and changed your clothes it will be too late. But of course you have to miss all those things when you have so much dusting to do." "There," declared Adella to herself a half hour later, "I like my room much better now!" She threw her dust rag into the air. "Next Saturday I will have time to enjoy the



Fig. 1

Fig. 2

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day. The idea," she went on in tones of disgust, "of dusting off atrocious decorations that immediately begin to gather more dust to cheat me out of more joys on other Saturdays!"

MUSHROOM MONEY

HUNTING mushrooms is a pleasant diversion for the outdoor hours and, as one of our contributors has found from experience, can be made a source of income for the purse of the girl who likes to roam the woods and meadows.

The first sunny, steamy days after a rain in spring and similar days in the fall are ideal growing weather for mushrooms.

The most likely places to search for the common meadow mushroom are in damp, rich soil, round willows on low-lying ground, along railway tracks, on the south slopes of pastures and lawns and round rotten stumps on old timber tracts; but it cannot be impressed too strongly on a beginner that she should be thoroughly familiar with the mushroom that she is seeking, that at first she should confine herself to the one variety *Agaricus campestris*, and that she should learn to know its appearance by studying descriptions of it and should have her first specimens verified by an expert. The cap is fleshy, hemispherical, cream-white or tawny in appearance and measures two or three inches across the top. The flesh is white and firm; the gills change with age from white to pink, and later to black. The stem is stout and smooth in texture and has a ring by which it can soon be identified. Study the picture of the specimen in some good book on mushrooms; you will find it worth while to write for Farmers' Bulletin 796, issued by the United States Department of Agriculture, Washington, D. C., on Some Common Edible and Poisonous Mushrooms. Mushrooms must be handled carefully, especially when they are picked and when they are washed, for they are easily broken.

Delicatessen stores, hotels and cafés afford the best markets for fresh mushrooms, for they buy in large quantities. Fifty cents a pound is a common price; the receipts on the average of the contributor previously mentioned, for a few hours' to half a day's work, are from \$4 to \$4.50 a day, for she is thoroughly familiar with her hunting ground. Her receipts for fresh mushrooms from her first three forenoons' picking was \$7.50—a result owing in part to the fact that in favorable weather three successive crops of mushrooms can sometimes be gathered from a single patch in one forenoon.

Even more profitable are the sales in winter, for then mushrooms bring from seventy-five cents to a dollar a pound. Throughout the season the girl spreads her surplus crop on paper for a day or two; then strings the mushrooms by the stems and puts them in a dry place. When they are thoroughly dried she stores them in paper bags. In drying they shrink a great deal, since they are mostly water, but when they are soaked in salt water, as they should be before they are cooked, they will swell to their original size and again take on a fresh appearance.

The demand for the girl collector's stock grew to such an extent that she has started a small mushroom farm that is proving profitable. She rented a small piece of sandy soil that was not valuable for truck farming. It was situated near a river, on the edge of the city where she lives; but any ground, properly fertilized, can be made to grow mushrooms.

A BARMECIDE FEAST

IN the Arabian Nights a prince amused himself by giving an imaginary feast to a beggar. You can amuse your party guests by giving them a feast that like the one in the story stimulates the imagination without appeasing the appetite.

Set a table with plates and in the centre place a covered dish that contains slips of paper on which you have written the names of good things to eat.

All the players who can find seats may sit; the others stand behind the chairs. The cover is lifted from the dish and each player draws a slip of paper and tries to guess what article of food the words on his slip represent. He writes his guess on the back, and if right he may draw another slip and so on until he makes a mistake. Then he gives up his seat to the person who stands behind his chair.

Each player keeps all the slips that he has guessed correctly, and the winner is he who has the most when the dish is empty. Of course no one except the host or hostess has a list of the correct answers. Here are a few examples of inscriptions for the slips:

- Fish.** 1.—Low spirited. 2.—High-colored. 3.—Cash on delivery. 4.—Warlike weapon.
Roast. 1.—An essayist. 2.—A woman's glory.
Fowl. 1.—Roman savors.
Vegetables. 1.—Hansom and old. 2.—Shout for blossom. 3.—A kettle, an article and a preposition. 4.—A city begins to grow.
Entrees. 1.—What we did at the School of Philosophy. 2.—Fear on an after-dinner speech. 3.—Biscuit soaked in molasses. 4.—Measures from the pen. 5.—Woman's chief weapon.
Pies. 1.—The father of his country. 2.—The burial of a fool. 3.—A negro's funeral.

- Puddings.** 1.—Jack's prize. 2.—60 in an hour. 3.—Baseball hitter.
Fruits. 1.—An interjection and large stoves. 2.—Two of a kind. 3.—Things hard to remember.

ANSWERS

- Fish.** 1. Blue. 2. Salmon. 3. Cod. 4. Sword.
Roast. 1. Lamb. 2. Hare.
Fowl. 1. Geese.
Vegetables. 1. Cabbage. 2. Cauliflower. 3. Potato. 4. Brussels sprouts.
Entrees. 1. Sausages. 2. Quail on toast. 3. Sweetbreads. 4. Pigs' feet. 5. Tongue.
Pies. 1. Washington. 2. Gooseberry. 3. Blackberry.
Puddings. 1. Plum. 2. Minute. 3. Batter.
Fruits. 1. Oranges. 2. Pears. 3. Dates.

GUM PRINTS

GUM PRINTS are easily made and are often very beautiful. The materials, which are inexpensive, are pure gum arabic, potassium bichromate in saturated solution, watercolor paints in tubes, two camel's-hair "mop" brushes, one badger blender and paper for sensitizing.

The colors most useful are: Venetian and Indian red, vermilion, red ochre, crimson lake, raw sienna, burnt sienna, raw umber, burnt umber, chrome yellow, Indian yellow, Vandyke brown, Prussian blue, lampblack and bistre. Lampblack is made from lamp soot and bistre from wood soot.

Any watercolor paper will do. It may be heavy and rough or light and smooth, as seems best adapted to the character of the negative from which the print is to be made.

Dissolve the gum arabic in hot water, an ounce of the gum to two ounces of water, and while it is hot strain it through cheesecloth to remove impurities. The low, round china pans used by watercolor artists are the best dishes in which to mix the solutions. Pour an ounce each of the gum and the bichromate solution into the dish and mix them thoroughly. Squeeze the colors out on a china plate, add a few drops of the gum solution, and rub the paints together with a palette knife. The amount of pigment that you should use will vary with the colors that you select; the transparent colors require more, and the opaque colors less, to make the desired depth of tone. Mix more of the paint than you really need, for it is almost impossible to duplicate a tone or shade. Add the paint gradually to the gum-bichromate solution and as you do so test the strength of the color by brushing a little on paper. Too little of the pigment gives a faded, and too much a muddy, print.

Cut the paper to be sensitized into sheets an inch or two larger than the negatives from which the prints are to be made. Attach the paper to a smooth board by thumb tacks, dip a mop brush into the solution and spread it on the paper. Do not charge the brush too heavily with the solution, for the coating must be a thin one. Next take the badger blender and draw it lightly over the paper first one way and then the other at right angles, until the coating seems even. You can do the sensitizing in daylight, but you must dry the paper in the dark.

Expose the paper to the sunlight under a negative as if it were a printing-out paper. When the image is well defined, remove the print from the frame and place it in a porcelain tray filled with water, heated to about 70° F. The water washes away such portions of the print as have not been acted upon by the light. As soon as the image is clear, lay it face up on a sheet of glass and brush it over with clear water, using the clean mop brush, then put it up to dry. The image is permanent and requires no after treatment.

The novice is advised to begin with transparent colors. A red that is especially pleasing and good for portraits of young ladies and children is made by mixing crimson lake, Venetian red and vermilion.

Some of the best combinations of colors are the following: Warm black, lampblack and burnt sienna; warm brown, Indian red and bistre; cool brown, Prussian blue and Vandyke brown; reddish brown, bistre, burnt umber, Venetian red and a little crimson lake; sepia, burnt umber mixed with the different reds; greens, Prussian blue mixed with the different yellows, and for olive green a little lampblack added; cool blue, Prussian blue and lampblack; warm blue, Prussian blue and Venetian red; copper-color, Venetian red, chrome yellow, bistre or lampblack.

One of the advantages of the gum print is that you can take out, with warm water and a brush, such portions of the picture as detract from its merit.

Although satisfactory prints can be made from almost any kind of negative, the ideal negative is one of medium density with good gradations of light and shadow. The principal reasons for failure are as follows: if the print runs as it dries, it was underexposed; if the image flakes away in patches, there was too much pigment in the coating; if the coating refuses to leave the paper, the print was overexposed or the paper was too old. The presence of yellow color in the high lights is due to too much of the potassium bichromate. It can be bleached out by immersing the print in a weak solution of sodium bisulphite. Paper freshly sensitized gives the best results and should be used whenever possible.



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THE YOUNG HOUSEWIFE



Foreword

TO make a house into a home the housekeeper must love her work, must see in it something besides drudgery. The daily routine of housekeeping can never be wholly freed from drudgery, but science and invention are constantly lightening the burden of it, and wise planning and a systematic method will lighten it still further. Many women fail to make and maintain an attractive home because they work at loose ends, without any definite plan. Such haphazard methods always end in weariness and discouragement. Careful planning is as necessary in housework as in any other business. A general outline, a weekly plan and a daily, detailed time schedule are among the most useful of household furnishings.

If the young housekeeper has help, she should have her schedules made out in writing. Giving the maid a clear-cut outline of her work in the beginning will avert many misunderstandings. A special table or cupboard in which to keep the books that have to do with the housework is also a convenience. The series of articles that is to follow, presented under the general title of the Young Housewife, will cover some of the practical problems of housekeeping, including methods of cleaning, the care of woodwork and metals, household pests, laundry equipment and methods. It begins where many of the housewife's problems must always begin and many of them end—in the kitchen.

I. Keeping the Kitchen Clean

THE kitchen, as the place where food is prepared, presents peculiar problems of care and cleaning. Because food may be contaminated and so becomes a carrier of disease, you must make the cleanliness of the kitchen one of your first duties.

An old rule but a good one is, "A place for everything and everything in its place." An orderly kitchen will be not only tidy but clean, since you cannot effectively clean round things that are out of place. Keep all food in the refrigerator, in a special cupboard or in the cellar; all waste in proper receptacles; all dishes in the dish cupboard; all pots and pans on their proper hooks and shelves; small tools in accessible places.

If you have planned and directed the building of your own new kitchen, you will have things as they should be. But if you are not so fortunate, you can still rearrange things so as to make a real workroom. Your work naturally falls into certain centres, such as those for preparing food, cooking it, serving it and washing the dishes. Group your equipment accordingly. Round the centre where you prepare the food place the pans, spoons, beaters and similar utensils. A kitchen cabinet is the ideal receptacle for them, but a table and shelves make a satisfactory substitute. Round the stove group the cooking utensils that you use there, as well as the flour, salt and pepper. A drop-leaf table or a wheeled tray on the route from stove to dining room make a serving centre. At the sink, the dish-washing centre, have ample space for the soiled dishes, the dish pan and the dish drainer. A shelf or a small cabinet keeps in order the soaps and other washing supplies. You will need a cupboard or pantry for surplus supplies, so that the working centres need be equipped only for immediate needs. Never let the kitchen table become so cluttered that you have to clear a place whenever you want to work. Above all never let food stand uncovered. It draws flies and other vermin and soon becomes unfit to eat.

The special cleaning problems have to do with the stove, the refrigerator, the sink, the care of food and the care of waste. A clean, well-kept stove makes the food taste better; the special care that you need to give it will depend upon the kind of stove. If it is one of the newer kind with a washable top, the task is simple. If it needs to be blackened, do it often enough to prevent rust spots from forming. There is on the market a dustless polish, which is good

for the purpose. After cleaning and blackening the range—naturally you would not apply blacking over grease or spilled food—light a small fire in the stove to dry it thoroughly.

Clean a gas stove with kerosene, but use washing soda and hot water on the burners occasionally. A kerosene stove must have daily care if it is to give the best service. Wipe off the wicks, or kindlers, and keep them even. So long as the enamel is unbroken, the cleaning will not be troublesome, since soap and water will do it. Don't let things boil over into the burners, or you will have hours of work to clean up afterward. Keep the tank well filled, the valve and feed pipes open and the air holes free. Remember that a clean stove, no matter what its fuel is, gives twice the service of a dirty, choked one.

The refrigerator of course must be kept scrupulously clean, or it will breed germs. Keep the box well iced. It is poor economy to use too little ice or to save it by using newspapers, because it is the melting of the ice that produces the low temperature. Every day go over the contents and use up left-overs as much as possible. One mouldy dish of food may spoil much good food. Wipe up immediately all spilled food. Once a week clear out the box, remove the racks and detachable pipes and clean each one separately. Wash out the box with soap and water or with washing soda and water, then chill it with clear, cold water. Hot water raises the temperature of the whole box and need be used only for an occasional scalding, provided you are faithful in the weekly care. Clear out the drain underneath to prevent it from clogging and overflowing. Re-ice the box and let it chill for several hours before you replace the food.

The sink also may be a breeding place for vermin unless it is kept clean and fairly dry. Make the walls round the sink waterproof or protect them with oilcloth. Always pour dishwater and other liquids through the sink strainer. Never allow grease to go down the pipes, for it clogs them; and coffee grounds should not go down unless there is a very strong water pressure to carry them out of the trap. It is always easier to keep the sink drain clear than to clear it out. If the pipes do clog, however, draw out the clogging material with a suction pump and flood the trap with hot water. After finishing the dishwashing it is a good plan to flood the drain with very hot water and then to dry the sink. Mend leaky faucets immediately, for dripping water forms rust spots in the sink.

Keep the food in dust-proof containers; uniform containers of enameled tin or glass are neater than the original cartons and bags. Perishable food is of course to be kept in the refrigerator or the cellar.

The care of waste is important. An unclean garbage pail gives off unpleasant odors. Have a covered one and empty it daily, then cleanse it with washing soda and hot water, scald it and leave it open to the air. A paper lining lessens the work of cleaning, especially if you do not throw liquids into the pail. Rubbish should be collected in a waste basket or box; the container matters less than using it faithfully. Empty it daily into the stove or wherever you dispose of your rubbish.

The kitchen must be equipped with screens to keep out both dust and flies and should have a ventilator to carry off cooking odors. The floor should be such as can be washed and kept spotless, and the walls should be moisture proof. If you consider and arrange all these matters carefully, you will find that your kitchen is an attractive spot—one where you are glad to spend your time.

A NEW GAME

ANEW game, which always causes much amusement, is Funny Faces. All the outfit required to play it is a table, a lamp, a pencil, a sheet of paper ruled in two-inch squares, an old newspaper and two or more fond-loving persons. An umpire may be useful but is not strictly necessary, for the winner can be determined by written voting slips. If an umpire is to decide who is the winner, he should not know the numbers that belong to the players.

Numbers corresponding to the number of persons playing are written on slips of paper and passed in a hat. The umpire sits apart from

the players, who do not call out their numbers.

Lay the sheet of paper on the table by the side of the lamp, crumple a piece of newspaper into a ball the size of a large marble, lay it at the side of a square near the lamp, so that the ball will cast a shadow in the centre of the square. Keep turning the ball, until it casts a shadow somewhat resembling a face. Outline the face with a pencil, add an eye, an ear, hair, a neck line, collar, or anything the player's fancy may suggest.

Anyone who has the faculty of putting in the extra touches, so as to accentuate the outline of the face, can get some exceedingly laughable results. Each player signs his number under his drawing, together with a title.

The player who draws the most amusing or striking portrait and names it most aptly wins the first prize.

HOW TO PLAN WORK IN THE COUNTRY

MANY people engaged in small farming, gardening or poultry raising fail to plan their work in such a way as to do the most necessary thing first. A contributor to The Companion, who evidently does not belong to that class, has followed for several years a simple and effective plan, which he thus describes:

"I have two lists of work that must be done at some time in the future. One is a general list for everything that I discover will have to be done, even though I may not find time to do some of the things for several months. The other is a programme for the next two or three days. Every evening I look over this second list and decide upon the work for the next day. Several times a week I examine the general list and notice whether any of the items on it are beginning to press for attention. As the tasks are transferred to the immediate list, I cross them off the general list; and when they are done I cross them off the immediate list.

"The following are three items on my general list at present; that is, in September:

"Tiling.
"Extra brooders.
"Fall planting of fruit trees.
"After examining them I decide that for the present the tiling can wait, although it will have to be done this fall if I am to get the good of it during the wet weather next spring. Extra brooders I shall have to have before the last week of March. I don't want to forget about them till the last minute, but for the present they can be ignored. The fruit trees are a different matter. I want to know just what I shall gain by putting them in this fall, and, as the planting season for trees will come in about six weeks, I must write at once to the State Experiment Station. Therefore that last item goes to the immediate list, and some time tomorrow, or possibly this evening, I shall write the letter.

"In connection with the lists I use sheets of check-ruled paper on which are maps of my small farm, showing the subdivision into separate fields; also, scale maps of gardens for three years past. These last show what I planted, and when and where I planted it. I can tell at a glance that on May 25, 1921, I set out two dozen Earliana tomato plants, and also that because of the cool summer I got no returns from them except in green tomatoes. The fact suggested that I choose warmer soil the following season, and also that I use such methods of pruning and fertilizing as tend to check growth of vine and hasten the maturity of the fruit. Accordingly, my 1922 garden map shows that I set out two dozen plants of the same variety on May 3, and that on August 31 I picked some ripe fruit. The map also shows the change of situation to rather light, upland soil.

"By looking over my scale maps I can tell what each piece of land has done for three years, and what it is now doing. That enables me to plan my work in such a way as to take advantage of my past mistakes."

PEONIES

IF the rose ever has a rival it will be the peony, for no garden flower has been improved to a greater degree in the past few years than the peony. By choosing early, medium and late flowering varieties it is now possible to have four or five weeks of uninterrupted bloom.

Once established, peonies thrive with but little attention, and few insect pests or plant diseases attack them. They run through a wide range of color and form; for some are single and others are so notably double that their centres are entirely hidden.

A point in favor of all peonies is that they are not particular about the kind of soil in which they grow, so long as it is well drained. They prefer a light loam, but even damp and

soggy ground can be made to do by adding sand and coal ashes. The ashes when sifted are of great value in improving heavy land.

The fall is the proper season for dividing or setting out peony plants. If there are large plants in the garden that have been growing for four years or longer, they can be taken up, the roots can be separated and the divisions can be reset this month. It is not well to cut them up too much; each root that goes back into the ground should have at least three eyes.

A good-sized hole should be dug for the roots, but not too deep, for the crowns should be only two inches below the surface. It is important to get the depth just right.

Bone meal and wood ashes are much safer fertilizers than manure. It is a good plan to dust the roots with lime before they are put into the ground. It is not necessary to use water when the plants are set out in the fall, but give established plants a good soaking once a week after they have bloomed, for it is then that the growth begins that will provide the next season's flowers.

If roots are received from a distance in a dry condition, you should wrap them in moss, put them in the cellar and let them stay there three or four days in the damp moss, to restore the plumpness of the roots.

Peonies do not like to be crowded. There should be two or three feet between the plants in the rows, and three feet between the rows themselves.

Some of the good varieties of peonies that cost a dollar or less are:

White. Festiva maxima, Couronne d'or, Avalanche, Marie Jacquin, Marie Lemoine.

Pink. Souvenir d'Exposition Universelle, Venus, Mme. Emile Gallé, Grandiflora, Jules Calot.

Crimson. Félix Crousse, Pierre Dessert, Rubra superba.

WHIZZ, A NEW LAWN GAME

IT is popular because it really is interesting, and because it requires no complicated outfit. Arrows are the only implements that the players use. They throw them by hand at a target marked in chalk or lime on the grass.

The game can be played on any lawn or grassplot where a target can be marked out. That can be done in the simplest way by using a stake and a piece of twine. The outer circle should be nine feet in diameter and should contain three other concentric circles, six feet, three feet, and one and one-half feet in diameter. The lines should be plentifully sprinkled with lime so that they can be seen plainly at a considerable distance. The players usually stand on a line seventy-five feet from the target.

The arrows should be the ordinary target arrows of the archery outfitters, each one winged with three feathers. It is also well for each player to have his arrows marked with a number or his initials, or with a distinctive color.

The players hold the arrow lightly between the thumb and fore finger, at such a point as seems to give the best balance, and launch it with as much force as is necessary.

The first shots are pretty sure to fly wide. Novices usually throw the arrow with too little elevation, so that it either falls short or strikes the ground at an angle that allows it to slide over the grass without fixing itself. The proper way is to give it such elevation as will let it describe a high curve in the air and finally fall almost straight down toward the target.

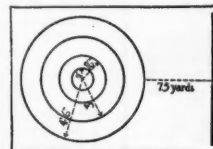
An arrow in the bull's-eye counts ten, one in the second circle five, in the third circle three, and in the outer circle two. A player forfeits one point for every one of his arrows that fail to stick in the ground.

INCREASING THE REACH OF THE OIL CAN

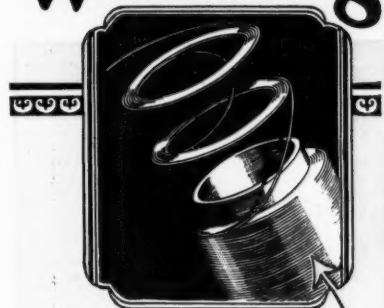
SPRING squeaks and body "chirps" are the bane of every automobile owner's life, but what can be done to eliminate them? The oil can will not reach all parts of the springs; neither will it spread oil round abrupt corners.

Here is an easy, simple way to overcome the difficulty and increase the reach of your oil can. Drill a quarter-inch hole in a large, long cork. Slip the spout of the oil can through the hole until the end projects about one-half inch. Then take a piece of stiff wire—copper wire is best—about eighteen inches long. Insert one end of it into the cork, parallel to the spout and touching it. Shove it in far enough to hold the wire securely in place. Your oil-can spout extension is now ready for use.

To use it bend the wire into any curve necessary to get round corners or into inaccessible places. Invert the can, press the bottom with



Study this Winding

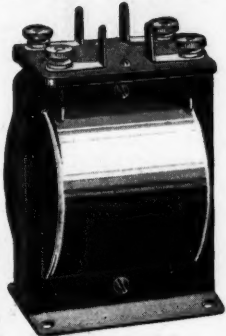


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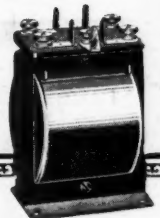
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the thumb in the usual way, and each drop of oil will run down the length of the wire to the end. When the wire is inserted between the automobile body and the frame or held in contact with the leaves of the springs oil can easily be placed where it is most needed.

GOOD TASTE AND PICTURES

THERE is an old saying that the clothes make the man; even more true is it that the pictures make the room.

Anyone who wishes to have an attractive room should give the most careful attention to the pictures: the subjects, the frames and how the pictures are hung.

She should choose frames that harmonize with the room, and that bring out the virtues in the pictures themselves. A sepia print, for example, may be framed close up in a wide, flat moulding, tinted dull green or soft brown, or it may be mounted on a brown mat and framed in dark brown or in dull gold. If the picture is an etching, it may be mounted on a white or a cream-colored mat and framed in a narrow gilt moulding. Select the style that is best suited to the room. Close framing—that is, without a mat—lets the picture blend well with a warm-toned, dark wall; so does a brown mat and a dark gilt moulding. On a light-colored wall, however, such frames are not pleasing. The light-colored wall requires a light-toned mat and a gilt or plain oak moulding.

Black-and-white pictures should seldom be framed in brown or gold, but should be mounted on mats of white or gray and framed in narrow mouldings finished in dull black, olive or gray of a shade darker than the mat. But if the subject is strong in treatment, close framing, with a flat, wide moulding of gray or dull green, is effective. Since close framing gives a picture a heavy look, it should be used only for large, important pictures. Small pictures look best mounted on mats.

Avoid polished mouldings; the best finish is a dull surface of the desired color, through which the grain of the wood shows.

In choosing a frame for a picture in full colors remember that the color of the frame must either harmonize with the colors in the picture or be directly complementary to them. Complementary colors are effective if the colors of the picture are vigorous, but the first plan is the easier to follow.

For most water colors and color prints of any kind use simple gilt frames and fairly wide white or cream-colored mats. But if the pictures are strong in color, as most reproductions from oil paintings are, gold mats or close, flat, gold frames are pleasing. For the gold frames use plain oak finished in dull gold or bronze; or, if you prefer, choose a design that has a simple, slightly raised border or moulding round the outer edge. In every case avoid heavy ornamentation.

An oil painting in rich, heavy colors usually looks best in a deep gold frame of rich design. The sharp glitter of the gold should be mellowed, so that the tone of the frame will harmonize with that of the painting. Such pictures and frames should be hung on walls that are subdued in tone and color. Oil paintings done in a high key—a treatment characteristic of much modern landscape work—must be simply framed. Use wide, flat mouldings or narrow ones—ornamented or not—and hang the pictures on light-toned walls in a room that is brightly furnished.

Above all no frame should draw the eye away from the picture. It should supplement, not command.

When you hang pictures remember that much depends on proper spacing. Each picture should be large enough for the space allotted to it, but not so large as to appear crowded. If both large and small pictures are to be hung on the same wall, it is a good plan to place a large one in the centre of each clear space and then group the smaller works on either side of it. A large upright composition looks well between two smaller oblong subjects, or vice versa, if the frames and colors of all of them harmonize. It is hard to arrange small pictures with unity of effect; the best way is to select those that in color and framing look well together and then hang them in a group, with only a little space between every two. In that way you can use your taste in arranging in an interesting manner the pictures of various sizes and proportions. A symmetrical balance of the groups is more effective than a formal arrangement.

Unless there is some reason for doing otherwise—as, for example, there is in hanging pictures along a stairway—keep either the top or the bottom edges of all the frames on a line. In a single row line up the lower edges; in a double row line up the upper edges and put the larger pictures in the top row.

Do not hang black-and-white pictures on the same wall with colored pictures; you will get the best results if you hang certain kinds of pictures in different rooms, placing each collection in the room that is best suited to it in tone, color and furnishing.

Do not let the frames tilt far forward, or the pictures will lose in effect. Unless the work is small enough to suspend by a pin hook or a single wire, use separate wires and two picture hooks. That gives a better appearance, and there is less chance of the pictures being tilted sidewise. Pictures that are hung low should lie perfectly flat against the wall.

RIVALS THE



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Runs Toy Machinery

Boys, just think of the fun you can have running this engine and making toy machinery for it! There will be no dull times, even on stormy days, if you have a "Big Giant" in the house. When steam is up the "Big Giant" will develop power sufficient to run the models you can make. The engine will also supply steam for a shrill blast of the whistle whenever the engineer so desires. Besides the fun you can have in this way, you will learn many things about steam power and machinery that may help you later in life.

Description. It stands eleven inches high and is absolutely safe. It is an improvement over all former styles in that ordinary kerosene can be used as fuel, instead of alcohol. Can be run full speed continuously for ten hours at a cost of less than one cent. It has a safety valve, steam whistle and a finely fitted water gauge that will always indicate the exact amount of water in the boiler. It has a large balance wheel and other necessary parts to make it the most powerful steam engine for toy machinery now on the market. In addition to the many features described, the following important improvements have been made this season. The boiler is now made of heavy, polished brass, solid brass connections for the water gauge, brass whistle base and cast piston connection. The engine is finely finished, free from danger of explosion, and one of the most popular articles for boys ever offered. Value \$2.75.

The "Big Giant" is manufactured exclusively for Companion subscribers and can be obtained only from us.

How to Get the "Big Giant" Engine

Ask a friend or neighbor to give you his subscription for The Companion for one year. Send the address to us with the subscription money and 35 cents extra and we will present you with the "Big Giant" steam engine. The subscription must be one that has not been upon our books during the past year, and it cannot be your own.

NOTE. This offer is made only to our present subscribers to pay them for introducing the paper into a home where it has not been taken the past twelve months. IMPORTANT. When sending in your order be sure to include the postage for the engine. Ask your postmaster how much postage will be required for a 2-lb. package and include amount with order. Be sure to have the steam engine sent by parcel post, as this will cost less than if sent by express.

THE YOUTH'S COMPANION, Boston, Massachusetts

"8" ALUMINUM "LOX-LID" COMBINATION COOKING SET



HERE is a Set of cooking utensils that will go a long way toward satisfying the desire of every housekeeper for a complete aluminum kitchen outfit. The Set consists of four pieces, so made that they fit together perfectly in various combinations to form eight different utensils such as are needed in the kitchen every day the year round. Each piece is stamped out of a solid sheet of aluminum. Cannot flake or rust like enameled ware — and there are no seams or soldered joints. Their practicability, by virtue of the heavy gage hard aluminum from which they are made, the superior workmanship put into their construction, the finely polished outside, the inside sun-ray finish, and the new Lox-Lid draining cover are features that will be appreciated by every housewife.

This is one of the most attractive as well as the most practical articles we have ever offered. Combining the four pieces will make the eight useful utensils described on this page.

THE LOX-LID WAY

HAVE you ever tried to drain the water from potatoes, beans and other vegetables only to have the food spill into the sink? Have you ever been obliged to hold the kettle awkwardly with one hand, with the other on the lid while the steam escaped and scalded your fingers?

If you have to contend with these annoyances, the advantages of the Lox-Lid with its special features will certainly appeal to you. The perforated draining cover is tightly held in place: a pressure of the thumb on the latch and click! The cover is lifted — no scalded fingers, no wasted food.

- 1 **6 Quart Preserving Kettle.** Especially desirable in aluminum which cannot form poisonous compounds with fruit acids.
- 2 **2 1-2 Quart Pudding Pan.** In addition to puddings and pastry this pan is equally useful for stews, bread, jellies, etc.
- 3 **Covered Baking Dish or Casserole.** The Casserole is becoming more popular each day. It will be found useful for the preparation of many choice dishes.
- 4 **Colander.** For draining vegetables, washing fruits, lettuce, etc.
- 5 **6 Quart Covered Kettle.** The Kettle is useful for stews, soups, for boiling vegetables, and for a thousand and one other purposes that are familiar to the housewife.
- 6 **Double Boiler.** By placing the Pudding Pan inside the Kettle and used with the cover, a perfect Double Boiler is secured, and can be used for cooking all kinds of cereals.
- 7 **Double Roaster.** The combination of the Pudding Pan inverted and Kettle makes a perfect self-basting Roaster. Tough meat or an old fowl, cooked in this Roaster, are made as tender as chicken.
- 8 **Steam Cooker.** The combination of Kettle, Colander and the Pudding Pan inverted makes a perfect Steam Cooker, enabling the housewife to cook two articles at the same time.

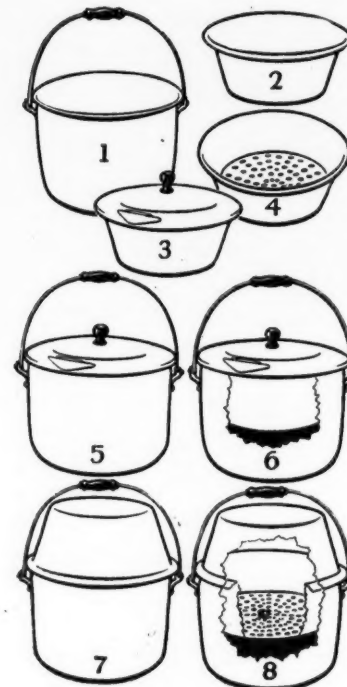
THE eight combinations made by this Set would cost at least \$6.00 if purchased separately. We are anticipating a very large response to our liberal Offer and have contracted for a large number of these Sets so that no one may be disappointed.



How to Get This Fine Set

ASK a friend or neighbor to give you his subscription for The Youth's Companion for one year. Send the address to us with the subscription money and seventy-five cents extra and we will send you one of these "8" Combination Aluminum Lox-Lid Cooking Sets. The Set will be sent by express or parcel post, charges to be paid by receiver. If parcel post shipment is desired, ask your postmaster how much postage you should send us for a 4-lb. package. The subscription price is \$2.50.

NOTE: This Set is given only to a present Companion subscriber to pay him for introducing the paper into a home where it has not been taken the past year.



THE YOUTH'S COMPANION, BOSTON, MASS.
881 Commonwealth Avenue